

The Boston Medical and Surgical Journal

TABLE OF CONTENTS

May 10, 1923

ORIGINAL ARTICLES.	
On the Role of the Imaginative Faculty in Medicine. By J. W. Courtney, M.D., Boston.....	711
Transactions of the New England Branch of the American Urological Association.....	716
Some Observations on Intestinal Obstruction. By John H. Lane, M.D., Boston.....	725
One-Child Sterility. By Donald Macomber, M.D., Boston.....	729
The Household Nursing Association. By Robert B. Osgood, M.D., Boston.....	732
Physical Improvement of Students at Citizens' Military Training Camps. By J. R. Koss, M.D.....	733
A Pulmonary Sequel of Influenza. By Oliver H. Stansfield, M.D., Worcester, Mass.....	734
Circumscribed Proctitis of Traumatic Origin. By William J. Rolfe, M.D., Boston.....	735
The Occurrence of Tubercle Bacilli in the Feces of Tuberculous Patients. By B. M. Fried, M.D., Boston.....	735
The Doctor's Opportunities. By Richard E. Dickson, M.D., Holyoke, Mass.....	737
BOOK REVIEWS.	
Sex and Dreams. By Dr. William Stead.....	742
What Is Social Case Work? By Mary E. Richmond.....	742
Obstetrics for Nurses. By Joseph B. De Lee, M.D.....	742
Current Literature.....	743
THE MASSACHUSETTS MEDICAL SOCIETY.	
Membership Changes from March 1, 1923, to May 1, 1923.....	745
EDITORIALS.	
The Importance of the Early Recognition of Tuberculosis in Infancy.....	747
Milk-Borne Epidemics.....	748
Milk-Borne Scarlet Fever.....	749
The Florence Crittenton League.....	749
Boston Health Department Bulletin.....	749
Charity of.....	749
The Citizens' Military Training Camps.....	749
The Household Nursing Association.....	750
MISCELLANY.	
Notes from the Worcester District Medical Society.....	750
Hampden District Medical Society.....	751
Worcester North District Medical Society.....	751
Boston Radium Club.....	751
Report of Haverhill Board of Health.....	751
A Health Officer Wanted.....	752
Broadcasting Public Health Information by Radio.....	752
News Items.....	752
OBITUARY.	
Albert Raymond Rice, M.D.....	753
CORRESPONDENCE.	
Accommodations for Members of the Massachusetts Medical Society.....	753
The Use of Insulin. Philip C. Means, M.D.....	753
The Caduceus. James Brown Thornton.....	754
American Medical Association. W. J. Puckner.....	754
NOTICES.	
Massachusetts Society of Examining Physicians.....	754
Meeting of the Boston Association for the Prevention and Relief of Heart Disease.....	754
Notice of Examination for Entrance into the Regular Corps of the United States Public Health Service.....	754
Society Meetings.....	754

Original Articles.

ON THE RÔLE OF THE IMAGINATIVE FACULTY IN MEDICINE.

By J. W. COURTNEY, M.D., BOSTON.

ONE of the most tenacious delusions, even among people who have had educational advantages, is that imagination is the outstanding attribute of the untutored and the superstitious. Never was anything farther from the truth. In his nowadays woefully neglected "Principles of Psychology,"¹ Herbert Spencer, one of the most brilliant examples of *constructive* imagination the world has ever seen, deals with this matter with his customary perspicuity. He tells us that, during early stages of human progress, the circumstances under which wandering families and small aggregations of families live, furnish experiences comparatively limited in their numbers and kinds, and that, consequently, there can be no considerable exercise of faculties which take cognizance of the *general truths* displayed throughout many special truths. It is only after there have been received many experiences which differ in their kinds, but present some relation in common, that the first step

can be taken toward the conception of a truth higher in generality than these different experiences themselves. Experiences made constantly more numerous, more varied, more heterogeneous, more involved, tend ever to widen the possibilities of thought and diminish the rigidity of belief; hence, *modifiability of belief* increases.

As fast as advancing civilization brings more numerous experiences to each man, as well as accumulations of other men's experiences, past and present, the ever-multiplying connexions of ideas that result imply ever-multiplying possibilities of thought. The convictions throughout a wide range of cases are rendered less fixed. Other causes than those which are usual become conceivable; other effects can be imagined; hence, there comes an increasing modifiability of opinion. This modifiability of opinion reaches its extreme in those most highly cultivated whose multitudinous experiences include many experiences of errors discovered; and whose representativeness of thought is so far reaching that they habitually call to mind the various possibilities of error, as constituting a general reason for seeking new evidence and subjecting their conclusions to revision.

Only as fast as general facts, presented in common by many special facts, come to be recognized, can there arise conceptions having proportionate abstractness, — conceptions having

¹Vol. chapter on development of conceptions.

the peculiarity that the matter of thought is no longer any one object, or any one action, but a trait common to many. Such conceptions of one degree of abstractness having become familiar, there arises the possibility of re-abstracting—the possibility of recognizing more-abstract truths common to many of these less-abstract truths. Each further step of this kind, which, as we see, implies a higher degree of representation and re-representation, is a further emancipation from the primordial concreteness of consciousness. And, after a certain stage in this progress, there become possible the conceptions of a *property* and a *cause*, which at first are impossible. Hence, it is manifest that there must be accumulation of experiences more numerous, more varied, more heterogeneous—there must be a correlative gradual increase of organized faculty and corresponding representativeness of thought, before there can be reached even the lower orders of those conceptions we distinguish as scientific. Progress in *definiteness* of thought is one of the concomitants of that progressing representativeness which makes possible increasing generality, increasing abstractness, and the resulting conceptions of co-existence and sequence. Similarly, the conditions which make possible the notion of uniformity, simultaneously make possible the notion of *exactness*.

When, therefore, intellectual progress, by the inclusion of a long series of conceptual increments, has reached the stage where representativeness of thought has attained to a high degree of development, *imagination* is strongly present, but never otherwise.

Confusion of thought, itself due to deficient power of representation, is responsible for the belief that superstition implies imagination, and this confusion has been fostered by the habitual antithesis of prose and poetry, fact and fiction. Most of the literature which has much currency being made up of statements known to be not actually true, and this literature, presenting fictitious personages, adventures, etc., being thus distinguished as avowedly imaginative, there has arisen an association between the idea of imagination and the idea unreality; the implication being that the imagination is powerful where the unreality is great; and consequently that people evolving and believing conceptions the most remote from truth are thereby shown to be the most imaginative people. After what has been said above, however, it will be manifest that the mental evolution which accompanies civilization makes imagination more vivid, more exact, more comprehensive, and more excursive. As already evidenced, that habit of thinking in terms of concrete objects and acts which primitive superstitions show us is a necessary accompaniment of low mental development; and as we have just seen, the credulity implied by such superstitions can decrease

only as fast as the experiences are organized into conceptions more numerous, more general, more abstract, more accurate—conceptions in which the quantity of things imaged, or imagined, is greater, and the representation of them relatively clear.

Between imagination which he characterizes as *reminiscent* and that which he terms *constructive*, the same authority* makes a very clear and very precise distinction in the following exact terms:

"Recurring to the doctrine that degree of intellectual evolution may be measured by degree of remoteness from reflex action; and remembering how in reflex action the combinations of psychical states are limited to repetitions of those which the organized connexions permit; it will be seen that in primitive men, imagination can rarely go beyond reminiscence, and then to but a small extent. When the only channels of thought are those established by experiences comparatively simple and of few kinds, the representations can be little more than repetitions of the presentations in their original order. But as fast as the experiences increase in number, complexity, and variety; and as fast as there develop the faculties for grasping the representations of them in all their width, and multiplicity, and diversity; so fast does thought become less restricted to the established channels. When consciousness is habitually occupied with greatly-involved aggregates of ideas which cohere with other such aggregates in ways that are very various and not very strong, there arises a possibility of combining them in ways not given experience. Gaining greater freedom as it reaches the advanced stages of complexity and multifariousness, thought acquires an excursive-ness such that with the aid of slight suggestions—slight impulses from accidental circumstances—its highly-composite states enter into combinations never before formed; and so there result conceptions which we call *original*."

From what precedes it is very clear that nothing could be more absolutely antithetical than imagination (particularly the constructive variety) as it really is, and the notions of it which still commonly prevail. It is also equally clear that this latter variety is not essentially an inherited endowment, but rather a matter of cultivation; and it may properly be added that a widespread knowledge of these two facts, throughout the medical body, was never more sorely needed than it is at the present moment.

In our day and generation ingeniously contrived mechanical aids to diagnosis are multiplying so rapidly that we have almost come to believe that we are thereby successfully emancipating ourselves from the need of subjecting our senses to that protracted intensive training which those of our forebears of the mid-nineteenth century were compelled to undergo. A more flagrant form of self-deception never ex-

*Principles of Psychology, same chapter.

isted. It matters not at all how perfect and delicately adaptable a given mechanical diagnostic device may be. It is of absolutely no consequence that a certain bio-chemical reagent is possessed of an exquisite sensitiveness and of a standardization which is absolute. The true significance of their revelations must ever remain a matter of human interpretation, and in no case, where the individual who essays to perform this task is devoid of the constructive imagination, may we hope to see the customary margin of error narrowed to such a point that medical science is genuinely advanced.

If, as is here contended, the paramount faculty in question is susceptible of cultivation by a more noteworthy proportion of the medical profession, a query naturally arises as to ways and means for making this achievement practical. And by way of a preliminary to a more complete answer, let it be said that it is not to be attained by exclusive immersion in a particular field of the science, since this is apt to bring with it a tendency to some form of dogmatism based on the assumption, made quite unconsciously, that the method and conceptions employed are adequate for the description of reality in its entirety, and not merely in special aspects.

In the preface to the first edition of his original, delightful and stimulating essays, the scholarly yet eminently practical Dr. John Brown* indirectly states his belief that the surest way to lead the imaginative faculty into constructively active channels is for us to return to the "old manly intellectual and literary culture of the days of Sydenham and Arbuthnot, Heberden and Gregory when a physician fed, enlarged and quickened his entire nature; when he lived in the world of letters as a freeholder, and revered the ancients, while at the same time he pushed on among his fellows, and lived in the present. . . ."

This, to be sure, was written shortly after the middle of the last century, but I feel morally certain that, when the eagerly-awaited biography of that universally lamented prince of medical scholars, the late Sir William Osler, is given to the profession, we shall find that he agreed in every particular with the above-cited recommendation of old John Brown. However this may be, we find other indirect answers to the question in point in the accomplishments of certain outstanding men who flourished as far back as those tragi-comic ages when physicians, as a rule, were over prone to spend their time and energies spinning out of their own bowels, so to speak, endless webs of speculation in which they were as frequently caught and destroyed as anyone else.† Such an outstanding man was Harvey, whose discovery of the circulation of the blood we are wont to trace to the possession

of transcendent genius rather than to its much more logical source—a sane and vigorous constructive imagination, as much the result of intensive training in humanism as in the purely physical branches of learning.

To an identical training Cuvier owed his power to formulate the law of the conditions of animal existence and to demonstrate, from a fragment of a characteristic osseous part, not only the class, order and family to which a given extinct animal belonged, but also the genus and species. And, in a time nearer our own, it was the same faculty, likewise trained, which enabled Huxley, taking in hand a simple fragment of chalk, to visualize and describe, in a manner at once scientific and comprehensible even to untrained minds, the manifold processes by which the formation of huge calcareous cliffs is accomplished.

By way of digression, let us turn for a little to the field of fiction, where we find that the faculty in question is invariably the outstanding appanage of those characters whose success in the unveiling of mystery and the detection of crime is transcendent; and it is the one trait above all others in their mental attainments, which lends them enduring interest and charm. Messieurs Dupin, Lecoq and Sherlock Holmes, for example, will continue to live in the minds of readers long after all the other creations of their respective authors have passed into the limbo of oblivion. And he it further said, since for the nonce we are launched upon this digression, that it is a constant source of poignant regret to those who admire the faculty under consideration, even in fictional characters, that the extraordinarily astute and versatile Voltaire did not exploit it at much greater length in his *Zadig*,* the most sagacious, lovable, human and memorable figure in all the seventy volumes which represent the philosopher of Ferney's egregious literary and philosophic labors.

The manner in which the youth *Zadig* came to cultivate the constructive imagination is most illuminating. Disgusted by the superficiality, fickleness and treachery of womankind, he sought happiness in the study of nature: "Nobody is more fortunate," he reflected, "than a philosopher who reads in this wonderful book (nature) which God has placed before our eyes. The truths he there discovers are his own; he nourishes and elevates his soul; he lives tranquilly; he fears no man, and his tender spouse is not forever hovering about in the endeavor to cut off his nose."†

Full of these ideas, he withdrew to a country-house on the borders of the Euphrates, where he wasted no time in silly effort to evolve silk from spiders' webs or porcelain from broken bottles. On the contrary, he studied deeply the

**Horae Subsecivae*, 1859.

†*Ibid.* *Horae Subsecivae*, *cit. supra*.

*1747 (?).

†One of *Zadig's* matrimonial adventures had exposed him to this unpleasant hazard.

peculiarities of animals and plants, and soon acquired a sagacity which disclosed to him a thousand differences where other men saw only uniformity.

One day, while walking near a little wood, he observed running toward him one of the queen's eunuchs, followed by several officers who seemed to be in the greatest anxiety and who were scurrying hither and thither, like men at their wits' ends, apparently in search of some lost treasure of utmost value. "Young man," said the chief eunuch to him, "have you by any chance seen the queen's dog?" "It is a bitch, not a dog," was Zadig's modest reply. "You're quite right," returned the eunuch. "It's quite a small spaniel," added Zadig. "She has only recently whelped, she limps with the left forepaw, and has very long ears." "Then you have seen her?" demanded the chief eunuch quite breathlessly. "No," answered Zadig. "I've never seen her, and never knew that the queen had a bitch."

At this precise time, by one of those not uncommon singularities of fortune, the very finest horse in the King's stables escaped from the hands of a groom in the plains of Babylon. The master of the hounds and the other officials made after it with the same anxiety exhibited by the chief eunuch in his pursuit of the bitch. The master of the hounds accosted Zadig and enquired if the latter had chanced to see the horse go by. "He's the best galloper in the string," replied Zadig. "He stands fifteen hands high, has very small hoofs and his tail is three feet and a half long. Furthermore, the studs of his bit are of twenty-three carat gold, and his shoes are of eleven-scruple silver." "Which way did he go? Where is he?" demanded the master of the hounds. "I've never seen him," returned Zadig, "and I've never heard speak of him."

Not unnaturally, in view of such replies, Zadig was forthwith haled before the magistrates for the theft both of the bitch and the horse and, having first been mulcted in the sum of four hundred ounces of gold, was permitted to plead his cause, which he did in the following terms:

"Oh, stars of justice, unfathomable depths of science, mirrors of truth, you who possess the weightiness of lead, the hardness of iron, the brilliancy of the diamond and mu^b affinity with gold,^a since you permit me to speak before your august assembly, I swear to you by Oros-made that I have never seen the respectable bitch of the queen, nor the sacred horse of the king of kings. This is how matters passed with me: I was walking towards the little wood, where I subsequently encountered the venerable chief eunuch and the very illustrious master of hounds. There I saw in the sand the tracks of an animal, and easily deduced that they were

those of a small dog. Certain furrows superficial and long, imprinted upon slight elevations of the sand, between the tracks of the paws, revealed to me the fact that they had been made by the heavy-hanging dugs of a bitch and, consequently, that this bitch must have whelped only a few days before. Still other tracks, at a different angle, which appeared to go on skimming uninterruptedly the surface of the sand beside the fore-paws, told me that she had very long ears; and, as I observed that the sand was everywhere less indented by a certain paw than by any of the others, I concluded that the bitch of our august queen was a trifle lame, if I may venture to say so.

"With regard to the horse of the king of kings, I will tell you that, while walking along the woods' roads, I noticed some shoe prints; they were all equally distanced. 'There,' said I, 'is a horse with a perfect gallop.' The dust of the trees, along a certain road only seven feet wide, was a bit brushed off, on either side, in parallel lines each three and a half feet from the road's centre. 'This horse,' I concluded, 'has a tail three and a half feet long, which whisked off that dust both to right and left.' I saw under the branches of the trees, which formed a sort of arbor five feet above the road-bed, some new-fallen leaves, so I knew that the horse had rubbed against them and, therefore, must be fifteen hands high. As for his bit, I know it to be of twenty-three carat gold, for he had rubbed the studs of it against a stone which I recognized as a touchstone and made an assay of it. To conclude, I judged, by the marks left by his shoes on some pebbles of a different order, that he was shod with silver eleven scruples fine."

To return to reality, the most recent utterance on the subject of the training of the constructive imagination in science is that of Viscount Haldane.⁶ He contends that, differ as humanism may from science, our experience in both fields must be regarded as "inoseculating," and he sees the solution of the educational problem in the bringing of the subjects taught in universities into organic relation with one another, thus exhibiting university teaching not as a collection of isolated fragments but as the outcome of standpoints all of which have their places within the entirety of knowledge. Thus classics and pure science cease to be ignorant of each other and of what reality signifies. Philosophy is made aware of science, science of philosophy, and the atmosphere of literature is made available for both.

For the sake of its direct bearing on the advance of medical science, it is devoutly to be hoped that the Haldane program of education will soon come to be a consummation. When it does, we may expect to see a noteworthy increment of pathologic and, consequently, of thera-

^aA peculiarly delightful touch of Voltaire satire. The italics are the author's.

⁶Id. "The Philosophy of Humanism and of Other Subjects." New York, The Yale University Press.

peutic conceptions which are truly the product of the constructive imagination. We may expect, furthermore, to see these conceptions couched in simple and vigorous Anglo-Saxon, entirely free from the bastard Greco-Latin and Anglo-Germanic neologisms which stud not a few of our present-day scientific expositions,—like so many paste jewels whose meretricious glitter serves to divert attention from the pinchbeck character of their setting.

Without exposing myself to the accusation of indulging in cavil, I think I may say that the greatest need of the constructive imagination is in the domain of minute pathology. In the field of neuro-pathologic research—to take but a single example—the last thirty years have witnessed developments, particularly in laboratory technique, never even dreamed of by the pioneers in this branch of the science. In consequence, we today possess upon the subject of the finer pathology of organic decay of central nervous structures, a literature appalling in its vastness. It is a literature of minutiae in the strictest sense of the term. And while it is an edifying testimonial to unrelenting and meticulously painstaking industry and inexhaustible patience, it will remain, so far as the practical end of evolving a scientific therapy is concerned, as dead as the tissues whence it was derived, until it is *assayed*, so to speak, by a mind which is utterly devoid of emotional bias, which possesses so truly the gift of sagacious discernment that it never, by any chance, confounds differences in degree with differences in kind, and which is capable of observing and generalizing phenomena and of expressing with punctilious accuracy their order and sequences—in brief, a mind in which are developed to the utmost all the attributes of the *constructive* imagination.

An essay, made by such a constructively-active mind, will unquestionably yield not only a universally intelligible conception of the morbid factors which have wrought the nervous decay, but also of their *modus operandi* at every stage of the process. And in analogous fields of pathology similar achievements will ensue through the efforts of minds similarly endowed. As a result, clinicians will come to be provided with much-needed scientific methods of treatment with which to replace many of the utterly futile and humiliating empiric procedures they are now constrained to employ.

TRANSACTIONS OF THE NEW ENGLAND BRANCH OF THE AMERICAN UROLOGICAL ASSOCIATION.

THE Annual Meeting of the Society was held on Tuesday evening, November 21, 1922, at the Harvard Club, Boston. The meeting was called

to order by the President, Dr. John W. Keefe. The Secretary read a letter from the Secretary of the National Association, stating that hereafter membership in the local branch does not carry with it the right to membership in the National Association. Candidates for admission to the National Association must make application before March 1.

The Society proceeded to the election of officers for the coming year. Dr. John H. Cunningham was elected President; Dr. Gilbert Smith, Secretary and Treasurer. The executive committee:

Massachusetts—Dr. A. H. Crosbie, Dr. W. C. Quinby.

Rhode Island—Dr. F. W. Hussey.

Maine—Dr. A. T. Mitchell, Jr.

Vermont—Dr. W. W. Townsend.

Connecticut—Dr. A. M. Rowley.

The following gentlemen were elected to membership in the Society:

Dr. Edwin D. Gardner, New Bedford.

Dr. Roger C. Graves, Boston.

Major Edgar F. Haines, Washington, D. C.

Dr. Ernest L. Hunt, Worcester.

Dr. John A. MacFadyen, Worcester.

Dr. Carroll H. Ricker, Worcester.

Dr. Samuel N. Vose, Boston.

The scientific program followed.

A CASE OF SARCOMA OF THE PENIS.

DR. JOLSON (by invitation): I wish to report first a case of sarcoma of the penis. A man, aged 57 years, entered the Peter Bent Brigham Hospital on September 5, 1922, with the following history:

Two years ago he first noticed a small wart-like growth on the left side of the glans penis, near the corona. This he cut off himself with a pair of scissors. He noticed nothing further for sixteen months, when a small reddish growth appeared at the site of the original wart. This grew quite rapidly, and in three months had reached a size about 3 cm. in diameter. He went to his family physician, who simply cut off the growth without any further treatment. The tumor soon recurred, and in about three or four months had reached its previous size. He again went to a doctor, who excised a small piece for microscopic examination. Diagnosis of sarcoma was made and he was advised to go to the hospital for operation. He had lost no weight nor had he had any trouble urinating.

At the time of entrance, examination revealed a large red fungating tumor which had involved practically the entire glans penis. The tumor was about 6 cm. in diameter. The external urinary meatus had been pushed entirely over to the right side and seemed to be in the region of the corona. The shaft of the penis appeared quite normal and showed no evidence of extension anywhere. Inguinal nodes on both sides

were enlarged. General physical examination and x-rays revealed no evidence of metastases to the lungs, pelvic bones, spine, or long bones. Blood Wassermann was negative. On the ninth of November Dr. Graves performed a complete extirpation of the penis with bloc dissection of both groins. The urethra was transplanted to the perineum. Patient made a very smooth recovery, and has been quite well ever since.

Careful search of the literature reveals only about thirty-two cases of malignant tumors of the penis other than carcinoma. Of these thirty-two, eight were melanosis; seven were endothelioma; two were fibrosarcoma; and fifteen were sarcoma. The majority of these latter were of the spindle type, or mixed cell type of sarcoma. Microscopic examination of this tumor shows it to be a spindle cell sarcoma, very cellular, with numerous mitotic figures. Special stains, such as Van Gieson's show that this tumor is probably of fibroblastic origin, rather than a myosarcoma. No metastases were found in the inguinal or femoral glands upon careful examination.

A CASE OF TUBERCULOSIS IN A SINGLE KIDNEY.

DR. JOLSON: A woman, 32 years of age, housewife, was admitted to the Peter Bent Brigham Hospital in September, 1922, with the following history:

Family History, negative. Had been married seven years but had never been pregnant. *Past History:* Had a tuberculous hip operated upon at the age of seventeen. *Present Illness:* As long as she could remember the patient had had nocturia, rising about twice a night to urinate. This had continued unchanged until six months before admission, when she began to have frequency and hematuria, and her nocturia became more marked. These symptoms continued unchanged until a month before admission, when they all became much more marked, and the patient began to feel very weak. Two weeks later she began to have nausea and vomiting, and four days before admission she had a suppression of urine which lasted for twenty-four hours and was followed by definite oliguria. At this time she became dull and apathetic, and had marked vomiting and frequent and persistent attacks of hiccough. At the time of admission she was definitely uremic and appeared critically ill.

Examination of the lungs showed no evidence of tuberculosis. Her right hip was ankylosed, and there was marked atrophy in the entire right lower extremity. X-rays of the kidneys showed an enlarged kidney shadow on the right. The kidney region on the left side was obliterated by intestinal gas, so that no information could be obtained concerning this side. Fluids were forced in every possible way, and elimination aided, but patient grew steadily worse and died on the second day after admission. Autopsy disclosed an old, healed tuberculous lesion at the

apex of the lung. The left kidney and ureter were completely absent. The right kidney was enlarged and markedly destroyed by tuberculosis. The right ureter and bladder also showed marked tuberculous involvement. The uterus was small, and there was an absence of the left broad ligament. The left tube was not attached to the uterus, but was a rudimentary structure in the region of the left internal inguinal ring, where the left ovary was also situated.

The relative infrequency of the absence of one kidney is brought out by the following figures: Morris, in a series of 15,900 autopsies, reports six cases. Piersol gives a somewhat similar proportion.

Anomalies of the genital tract are rather frequently associated with such congenital anomalies of the kidney. Thus Radash, in 255 cases of congenital absence of the kidney, found that in about 100 of these there was also an associated anomaly of the genital tract.

PAPILLOMA OF RENAL PELVIS.

DR. J. D. BARNEY: I wish to show an interesting specimen of a kidney with papilloma of the pelvis. The patient was a man of 63 who was referred to me in May, 1922. There had been hematuria for about a year, but absolutely no other symptoms. He had lost no weight. He was cystoscoped last summer and again last December by another surgeon, who made no definite diagnosis but thought the blood came from the prostate. Examination showed a well-preserved, healthy man. Abdominal examination negative. Neither kidney felt. Prostate not enlarged by rectum. Urine very bloody. Cystoscopy showed a normal bladder and prostate. Bloody urine was seen to flow from the right ureter. Catheters passed easily to each kidney, the right urine being bloody, the left clear. The right sediment contained much blood, a few leucocytes and a few motile bacilli. The left sediment contained nothing abnormal. Phthalein (intravenous) appeared on both sides in about 5 minutes. The amount from the right side was 10 per cent.; that on the left 35 per cent. Non-proteid-nitrogen was 37.2 mgms. per 100 c.c. of blood. A right pyelogram showed only the lower half of the renal pelvis. The calices in this region are normal. The upper portion of the pelvic shadow has a depression such as would be produced by a lobulated mass. The kidney outline was normal in size and shape.

As the evidence pointed to renal tumor, operation was performed June 8, 1922. Right nephrectomy was performed without difficulty through an anterior, transperitoneal incision. During the operation it was noted that the renal pelvis was apparently filled with the mass; otherwise nothing abnormal was noted.

Convalescence was smooth and short. The patient was recently seen and is in good condition.

On splitting the kidney a papillary tumor the size of an English walnut was found occupying the upper calices and pelvis. An examination of this tumor by Dr. H. F. Hartwell showed "circular cords and strands of epithelial cells, arranged around central stalks of connective tissue. These cells are uniform in their size and appearance. The examination does not suggest a malignant tumor. The appearances are those of a papilloma."

As there are but few of these cases reported in the literature, it seems worth while to put this case on record. The specimen has been given to the Warren Museum at the Harvard Medical School.

PROFUSE UNILATERAL HEMATURIA THE RESULT OF MALIGNANT ENDOCARDITIS AS A COMPLICATION OF CANCER OF THE PROSTATE.

DR. W. C. QUINBY: A man 59 years old was admitted to the Peter Bent Brigham Hospital on the eighth of November, 1922, complaining of hematuria. His previous health had always been good. During the past year he had lost possibly eight or ten pounds.

About six months ago nocturnal frequency of urination began, together with definite lack of force in the stream. There was no pain, but those symptoms persisted until about two weeks ago when he noticed for the first time that there was a slight amount of blood in the urine. Since this there has been some blood at each urination, until at present his urine is highly colored and frequently contains clots. Although the bowels have been perfectly regular until five weeks ago, since this time there have been two or three attacks of marked constipation for which active catharsis and enemata have been necessary. No bleeding has been noted from the bowel.

At physical examination patient appeared rather pale. Temperature, pulse, and respiration were normal. Lungs were normal. Heart not enlarged. Sounds regular and of good quality. A soft systolic murmur was heard over the apex only when the patient was standing. It was not transmitted. Blood pressure was 150/90. Abdominal examination was negative except for slight distention. Below the right knee there was a black and blue spot about 3 cm. in diameter, and a similar area on the left leg. There had been no history of trauma. On rectal examination the prostate appeared somewhat enlarged, a little firmer than normal, and the notch was obliterated.

Laboratory findings: Hemoglobin, 60 per cent. Red blood count, 3,200,000. White blood count, 5,300. Stained slide showed a secondary anemia, with no other change from normal. The urine was intensely bloody, and the microscope showed only red blood cells in the sediment. The patient was cystoscoped, and after washing the numerous clots out of the bladder the organ was found to be itself normal. There was no

intravesical evidence of enlargement of the prostate. The source of the blood was found to be from the left ureter, and the jets appeared with great intensity and increased frequency. The urine from the right kidney was negative. X-ray investigation showed that the right kidney was somewhat smaller than usual, while the left was definitely larger than normal. On injection of the left kidney pelvis with an opaque solution the outline of the pelvis was seen to be very irregular. Report: Findings are not characteristic, but may be due to either hypernephroma or tuberculosis.

Following cystoscopy the patient continued to bleed copiously so that the bladder had to be washed out frequently to remove clots. Temperature remained normal. Left nephrectomy was done as an emergency measure because of the severe hematuria, and a kidney which appeared macroscopically normal except for increase in size was removed. Its pelvis was found filled with blood clots, and there was some evidence of hemorrhage under the mucosa. Because of the patient's critical condition he was given a direct transfusion of blood at the end of the operation. Soon after this hiccup began, with signs of beginning uremia, and there was some evidence of hemorrhage under the mucosa. The bladder continued to contain large amounts of blood. A second transfusion was without beneficial result, and the patient died in coma two days after operation.

At autopsy there was found a high degree of stenosis of the rectum which was encircled by cancerous infiltration. This was found to be a direct extension from its seat of origin in the prostate. A vegetative endocarditis was present, together with an acute embolic, infectious nephritis.

A CASE OF CALCULUS PYONEPHROSIS.

DR. R. F. O'NEIL: This specimen is from a woman, fifty years of age, who had had urinary symptoms for a period of sixteen years, that is pyuria, frequency, and attacks of pain in the right loin. She was seen by Dr. Henry J. Perry who had her x-rayed by Dr. George, and then referred her to me for operation. The plate showed large multiple calculi in the right kidney. On cystoscopy the left kidney was found normal with good function. There was only a little purulent material from the right. She made an excellent operative recovery. It is interesting to state that this patient had been treated by lavage of the right renal pelvis at intervals of one to two weeks for a year. The specimen is an interesting one showing a totally destroyed kidney from calculus.

A SPECIMEN OF CANCER OF THE PROSTATE.

DR. J. H. CUNNINGHAM: I have a specimen which I think is unusual, a specimen of carcinoma of the prostate removed suprapubically in one piece, and you will see that at the base the

seminal vesicles are upon it. It was from a patient who gave the following history:

He had extreme difficulty in urinating, and we had to do an immediate suprapubic drainage. We have taken out a great many carcinomas of the prostate suprapubically. Most of the specimens do not, however, show as well as this one. It has occurred to me that our success in doing this depends somewhat on certain features of the technique, primarily to free the vesical sphincter greatly, far more than we do in a suprapubic prostatectomy, and then freeing the gland anteriorly down to the membranous urethra and breaking the membranous urethra off down to the base of the prostate and fastening some instrument that will close at that apex and making a dissection from below upwards along the posterior surface; in other words, rotating the prostate up into the bladder.

We carry the dissection by the aid of the finger or by a blunt dissecting instrument so that we reach the posterior capsule all the way up, and when we get to the region of the vesical sphincter, break through the capsule and carry the dissection to the posterior surface of the bladder.

We have been able to get some specimens with the greater part of the carcinomatous vesicles with them. In some instances we have been successful in this way. This was an adenocarcinoma.

ABNORMALITIES OF BLADDER FUNCTION IN WOMEN.*

BY WM. C. QUINBY, M.D., BOSTON.

It is my purpose to discuss with you tonight several types of abnormality of the function of micturition in women, as illustrated by cases which have been seen during the past few years in the Urological Clinic of the Peter Bent Brigham Hospital.

Though the normal act of micturition is essentially the same in each sex as regards its neuro-muscular control, there occur under pathological conditions variations, often of considerable degree, which for the most part are the result of differences in anatomical structure. The short urethra with relatively slight fixation of the bladder neck in women is to be compared with the long urethra and increased fixation due to the male prostate gland. The female internal genitalia also furnish a possible source of influence on the bladder not present in men. Normally, also, the female bladder has a greater capacity than the male, although the sphincteric control is notoriously weak and subject to various traumata such as those of childbirth.

Besides these normal variations there occur considerable differences in the symptomatology which similar processes cause in the two sexes.

*From the Urological Clinic of the Peter Bent Brigham Hospital.

For instance, the pain of an *acute cystitis* in man is frequently referred to the perineum, the suprapubic region, and into the head of the penis. In woman I have never seen pain referred to the clitoris, which is the analogue of the glans, but complaint is frequently made of an external urethral orifice which is very tender to touch, and in some instances this is so marked that the patient cannot sit square on a hard surface without extreme pain. The sitting position assumed under these circumstances is with lateral bending and twisting so that the weight of the body is thrown over onto one or the other hip and removed from the vulva. The pain of an acute bladder infection in woman is also very apt to be referred into the lateral regions of the pelvis or even to the region of the hip just above the trochanter. Pain in the back over the sacrum, so common in uterine pathology, is not usually the result of an uncomplicated bladder lesion.

PATHOLOGY.

The female urethra is not subject to pathological conditions to the same degree as is the male, although of course similar conditions such as *stricture* may occur in each. The *urethral caruncle* is common and I will not discuss it. *Abscess of a Skene gland* as a complication of a gonorrheal urethritis occurs occasionally. I have not seen it follow any other form of infection, however. Those cases of *stricture* in women which we have observed have all been of fairly large caliber and have not caused obstructive symptoms, but only a relative irritability instanced by frequency of urination with a varying degree of ardor, usually slight.

The response of the female bladder to infection is quite different in some respects from that seen in the male. In the first place the mucous membrane over the trigone and especially at the internal urinary meatus is prone to form into bullae in the presence of even a very slight degree of infection. I suspect that this is due to a variation in the submucous layer, the absence of the prostate and vesicles, allowing a tissue of looser texture, or one in which the lymph spaces are more easily blocked by the products of inflammation. However this may be, just at the entrance to the female bladder there occur not infrequently small polypoid prolongations of the mucous membrane of exquisite delicacy, semi-translucent. At times a single blood vessel of capillary size will be seen coursing into the polyp in loop formation. These structures in my experience seem always to be the result of infection; usually of the chronic or recurring variety. Whether or not they are in themselves the cause of terminal pain on urination I am not sure. Certainly in one instance in which I destroyed a large group of these structures by fulguration there was no relief; but of course in this instance the condi-

tion produced by the fulguration may have been more extensive and deep than that existing before its use.

In other respects the female bladder seems to be rather more resistant to infection of extreme degree than does the male. In tuberculosis, for instance, one rarely sees so much deforming ulceration and contraction in the trigonal region as is found in the male. As to the causes of infection of the female bladder surely the short urethra must play a rôle in these instances which ascend from below. Of even more importance, however, is a cystocele, for this can and often does cause a definite retention of urine, though not nearly of the same amount as is found in the prostatic. This merely serves to emphasize the fact that the presence of any residual urine is of vastly greater importance as regards the incidence of infection, than is its amount.

Let us turn now to the consideration of a few illustrative cases.

BLADDER DYSFUNCTION THE RESULT OF NERVE LESIONS.

In woman, as in man, there occur bladder disturbances which are due to the nervous system, either central or peripheral. These disturbances are most often of the motor variety, although as in tabes, both sensory as well as motor spheres may be involved.

A woman of seventy-five suffered an attack of cerebral apoplexy during which she lost consciousness, but had no marked paralysis. For a short time her speech was thick and the left arm and leg were weak. She was then found to have lost the ability to empty the bladder so that the incontinence of overflow supervened. Evidently the nervous control over the detrusor muscle had been upset, while that to the sphincters either remained intact, or what was more likely, was the seat of increased tonus, or spasm. Under catheterization and the instillation of 10 per cent. argyrol the bladder gradually entirely regained its normal function. Cases of incontinence the result of lesions of the spinal cord, such, for instance, as tumors, have no peculiarity due to sex. In Dr. Cushing's service such cases are not infrequent, but since the bladder phenomena are merely part of a whole group of associated lesions I will not discuss them.

INTERFERENCE WITH BLADDER FUNCTION DUE TO EXTRAVESICAL CAUSES.

The instances are frequent in which pathological lesions external to the bladder itself, but neighboring on it, involve it in processes which interfere with its function.

As an instance of this I may mention the case of a woman of forty-seven who entered the hospital complaining of frequent, painful urination. These symptoms had been present

for about 20 years. After having begun they reached a moderate degree of severity which had not increased but had remained quite constant. Usually she urinated about every hour during the day and four to five times during the night. There had never been any pyuria or hematuria. After the symptoms had lasted for about two years patient was subjected to an operation on the bladder, presumably an anterior colporrhaphy. This was not followed by relief, so that two years later another examination was made under ether, at which time patient does not know exactly what was done. For 15 years the patient has been undergoing intermittent treatments of the bladder with argyrol. These have given some benefit, so that there have been periods of two to three weeks at a time when her bladder symptoms would be greatly improved, but they have never been entirely absent. During the past year the patient has not been able to work because the bladder symptoms have been so unbearable. Nevertheless her general condition has been very good. Catamenia has always been normal. She had one child twenty-six years ago, and on general physical examination is normal except for marked overweight (206 lbs.). Examination of the bladder showed it to be essentially normal, although its capacity was diminished to about 300 c.c. There was evidence of slight interference with vascularity, as instanced by one or two areas of hyperemia in the vault. Pelvic examination under anesthetic showed marked relaxation of the vaginal outlet and a considerable degree of cystocele. The uterus showed numerous nodules which felt like fibroids of about the size of a hen's egg. One of these nodules, or the fundus of the uterus, itself, lay far backward in the hollow of the sacrum. The others lay more anteriorly in a region which may well be believed to interfere with normal function of the bladder. The best judgment seemed to be to remove the uterus, which was accordingly done. It was found on entering the abdomen that the bladder was markedly obstructed by the presence of multiple fibroids. Since operation the patient's condition has been much better.

In this instance the interference with the bladder was manifestly secondary to the various fibroids in the uterus. A second and more marked instance of extravesimal pathology is the following case occurring in a married woman, 49 years old, and weighing about 208 pounds. She had had five full term pregnancies, and during the past five years had complained severely of frequency together with urgency and burning on urination. Two years before we saw her there had been an operation done by the vaginal route, apparently on the supposition that the bladder difficulty was due to malposition of the uterus together with descensus. The uterus was inverted so that its fundus was drawn upward between the anterior vaginal wall and the floor of the bladder. Since this opera-

tion the bladder condition has been neither better nor worse. Examination of the organ by cystoscope at present shows marked deformity in the central portion of the floor of the bladder, together with some evidences of infection. Bladder capacity is definitely diminished, being somewhat less than 200 c.c. An attempt was made by operation through the abdomen to relieve this situation. It was found that the bladder and uterus were intimately united low in the pelvis by bands of scar tissue. These organs were, therefore, dissected apart, and a large graft of omentum interposed between the denuded area and the posterior wall of the bladder. There has been a considerable degree of relief since this operation, although the cystitis has not yet been entirely cured, and the patient is still under treatment.

A third case of this sort concerns a married woman of 50 who had had a hysterectomy for fibroids 6 years before entrance, and who complained of frequent, painful urination following this operation. She was carefully studied over a considerable period of time and no intravesical cause for the very persistent frequency discovered. This was so great as to make it practically impossible for her to perform her necessary daily activities. The urine was entirely normal. Vaginal examination showed marked contraction in the vault around the remaining stump of the cervix, and from this there came a moderate amount of discharge. She had lost a good deal of weight, grown weaker, and it seemed imperative that the pelvis be investigated in an attempt to relieve the symptoms on the part of the bladder. On opening the abdomen there was found deep in the pelvis just behind the bladder and immediately superimposed on the cervix a small pouch about 2 inches in diameter, which contained a glairy, turbid fluid on opening. Other than this no pathology was found. Following operation, however, the patient's condition was infinitely better on the whole. She continued, however, to have an occasional attack of cystitis during the next two years, but her last report, made three years after operation, shows that she has now practically no discomfort on the part of the bladder and has gained 40 pounds.

In this case it is interesting to speculate on the significance of the cervical stump of the uterus which was left behind at the original operation. With further experience today it is my feeling that in all probability this served as a focus of chronic infection, and that although the infection did not actually reach the bladder it nevertheless did cause a considerable leukorrhea, and this in turn served as an irritation to the bladder musculature. I have since seen an analogous case in which the remaining portion of the uterus left after hysterectomy formed a definite and very irritating abscess cavity in the vault of the vagina. This would discharge for a while, following which the dis-

charge would cease and the process apparently be cured, only to break out anew with increased severity. It is probable that such conditions are due to an insufficient sterilization of the cervical canal before hysterectomy is performed.

BLADDER DYSFUNCTION DUE TO INTRINSIC PATHOLOGY.

First for consideration come those cases of incontinence of urine in women which are so frequently due to inefficiency of sphincteric control. Anatomically the external sphincter is but poorly developed in the female sex, as is also the trigone. We find, therefore, not infrequently a loss of sphincter action coming on as a sequel to childbearing, or later in life as a result of increasing laxity of tissue with lowering of muscle tone.

The following is a typical case: A woman of 48 complained of inability to hold urine while standing, though when lying down there was no leakage. She had had 5 pregnancies. The incontinence came on rather suddenly about three years before. Examination showed a woman of 210 pounds with patulous urethra, perineal tear, but slight cystocele. Uterus normal. The urine and renal function were both normal. Examination of bladder by cystoscope showed nothing abnormal except for a considerable laxness at bladder outlet. There was slight hyperemia of the trigone. The operation of suture of the sphincter so well described recently by Dr. Young, and earlier by Kelly, was done. A year later the patient reported perfect control, in spite of the fact that she had gained more weight.

In only one instance has this type of operation failed to cure the condition.

The incidence of *infection of the bladder* in woman when secondary to a descending process from the kidney is no different on the whole from that seen in man. Here, too, we must continually emphasize the fact that *cystitis per se is never primary* even though at the time of examination there may be no discoverable infection in either kidney. Because of the frequency of *cystocele* in women a cystitis due to this cause is common. Illustrative cases are not necessary as the condition is easily recognized. Local treatment of the bladder should always be accompanied by some procedure adapted to the cure of the underlying cystocele. This may take the form of a simple pessary or of an operation on the anterior vaginal wall, or more usually some procedure on the uterus itself.

There have been a few very instructive cases of infection of the bladder, however, of the deeper type, the interstitial cystitis, or the type mis-called by Hunner as elusive ulcer.

For instance: A girl of 28 years complained of frequent urination accompanied by some pain and burning. Two years before entrance she had been subjected to an Alexander operation to correct a supposed retro-displacement

of the uterus. Both wounds became septic and her symptoms were in no way relieved by the operation. Examination of the bladder by cystoscope showed only a few areas of hyperemia, on the base and in the vault. The urine was sterile but contained a rare white blood cell. On pelvic examination the uterus was found adherent in a position practically upside down, and this apparently caused a flattening of the bladder in an antero-posterior direction. It was thought that the malposition of the uterus offered the major indication for treatment, so this was replaced by a ligament shortening operation. At the same time an ovary which had become cystic was removed together with the appendix.

Pathological Report.—Cystic ovary; normal appendix.

Sixteen months later the patient again entered the hospital. She had had obstinate frequency ever since operation, although she had been faithful in submitting to local treatment in the office. The bladder was free from infection, but in the vault there was persistently found an area of hyperemia with some puckering. The bladder capacity was about 150 c.c.

At a second operation, therefore, the bladder was opened and the area seen by cystoscope excised. The pathological report of the tissue excised showed chronic inflammation with loss of mucosa.

Twenty months later the patient entered the hospital for the third time. She had still been faithful to local treatments, but was, on the whole, no better than when first seen over three years before. The urine continued to be essentially negative, but on one or two occasions a bacteriological report of staphylococcus albus had been returned. This time, after anesthesia had been induced, the bladder was grossly over-distended with fluid, a procedure which it had been quite impossible to carry out when she was conscious. This caused an area in the vault to bleed from multiple small spots. The abdomen was then opened for inspection and found to be quite negative except for a small fibroid 1.5 cm. in diameter at the anterior junction of cervix and body of the uterus. Although apparently of no significance, this was removed. The peritoneum was then closed and the bladder opened. The area previously outlined by bleeding was identified, widely excised, and the organ closed with only urethral drainage. On discharge three weeks later the patient could hold water better than she had been able to do for six years. Urination was performed at intervals of four to six hours and the bladder capacity was somewhat over 500 c.c.

The pathological report showed chronic inflammatory tissue in the bladder wall.

Nearly a year has now passed since the last operation during which the patient has considered herself entirely well.

The moral of this is that had a proper diag-

nosis been possible at the time of the patient's onset of symptoms and had this been followed by an adequate excision a much earlier cure could doubtless have been obtained.

There have been a number of other cases of this same type of interstitial cystitis in our clinic, and all thus far seen have occurred in women. One of these equals in interest that just related both in duration of treatment as well as in severity of symptoms. It concerns a woman 62 years of age who had been so much at the mercy of her bladder that for many years she had been unable to attend church or any other social function. During the next 21½ years she was subjected to both excision of a portion of the bladder as well as a pan-hysterectomy. She is now entirely free from symptoms. Others of the cases have responded to one or two distentions of the bladder under a general anesthetic. This is a valuable procedure but it will fail in some instances.

Another condition seen occasionally in the female bladder, and but rarely in the male, is that of involvement by a dermoid cyst. I have already reported two such cases. The ordinary papilloma of the bladder, whether benign or malignant, does not seem to be nearly so frequent in women as in men, to judge from our experience. Foreign bodies are, of course, common and of no scientific interest.

That there can be such an affair as *bladder allergy* or sensitization has seemed doubtful to most of us. In the following case, however, I must admit that this seems the only probable diagnosis.

A woman of 32 who had had one child without event began about a year ago to have severe attacks of frequent, painful urination. Careful examination failed to find any evidence at all of any pathology in the urinary tract. Repeated cultures were sterile. On better acquaintance with the patient I found that she had a definite susceptibility to onions, even the least trace of which in the food would cause an attack similar to asthma. And it was also in connection with these attacks that the bladder urgency and pain appeared. If you believe in sensitization you will easily see here a definite cause and effect. For myself, I must admit a considerable degree of skepticism, though in view of the entirely negative and very thorough examination, I can offer you no better diagnosis.

I must ask your indulgence for the fragmentary character of these remarks. They merely serve to illustrate a few of the various problems as they occur in the clinic. Many conditions have not been touched on; but if I have in any small way been able to help in your solution of the problems of the "woman and her bladder," my aim will have been accomplished.

DISCUSSION OF DR. QUINBY'S PAPER.

DR. GEORGE G. SMITH: I think that Dr. Quinby has brought up some very interesting

eases and has shed light on a subject which really has been shrouded in darkness. He speaks as believing that primary cystitis in women does not exist. I have seen several cases in the past year or two where it seemed that the cystitis, which was acute, was really primary. I didn't catheterize the ureters, but there was nothing to suggest an infection above the bladder. The attack of cystitis came on after exposure to cold, sitting on a cold stone or taking a long automobile ride or something of that nature. The attack was transient, lasting a week or so, and then cleared up. The patient had practically no fever during this condition. I believe that occasionally we meet an acute cystitis in women which is not dependent on infection from above. Of course, it isn't possible to rule out the fact that organisms may have come from the kidney without giving symptoms of infection there, but it seems that the other route of ascension from the lymphatics or from the urethra is perfectly possible.

Recently, I think in the *New York Medical Record*, Dr. W. W. Duke, who was a house officer at the Massachusetts General Hospital when I was, reported a number of cases of bladder allergy. He demonstrated a definite skin reaction upon the injection of certain proteids, and by eliminating from the diet those foods to which the patient was susceptible, the bladder condition ceased.

There are, I believe, a large number of cases of what is called cystitis in women, of frequency, urgency and burning on urination, in which the urine is normal and in which the cause of these symptoms resides in the urethra and in which you have a very definite urethral condition, a low-grade inflammatory process, which is demonstrable with the endoscope, and which can be entirely cleared up by dilatation of the urethra and by application of strong silver nitrate to the urethral mucous membrane. Undoubtedly Dr. Quinby has seen many of these cases but didn't see fit to go into that type of case in this particular paper; but I think such cases are so numerous that we should have in mind urethritis as a cause of bladder symptoms in diagnosing a case with frequent and painful urination.

DR. JOHN W. KEEFE: Dr. Quinby has portrayed a great variety of cases and thrown considerable light on a dark subject. I have in mind a woman whom I saw last June, who was single, about 50 years of age, had reached the menopause six months previously. She said that for over ten years she had frequency of urination, of late passing water some two to three times in every ten minutes during the day. At night she seemed more relieved but had to rise at least four or five times during the night. So you can imagine that her condition was distressing to her. We used the cystoscope but could see nothing but an area of congestion about the trigone. I had an idea that possibly

dilatating the bladder sphincter and the sphincter ani might be of some value. So I introduced sounds into the urethra up to about the size of 36 French and also dilated the sphincter ani. We irrigated the bladder afterwards for three weeks and also used argyrol for instillation. I have often felt that it was chiefly the dilatation that improved that woman. I saw her within ten days, and she is absolutely normal at the present time. I think only twice during the month did she have to urinate once during the night; and she went during the day time some 15 hours, urinating but once during that period. So it would seem now after five months that she is cured of that very distressing condition.

DR. F. A. PEMBERTON: I would like to present the problem of a woman who has had no children but complains of dribbling. Cystoscopy shows no cystocele and the bladder is negative. I have seen three maiden ladies of from 35 to 50 like this. The neurological examination is negative. I operated on one of them by the Kelly method and it did her no good; pessaries do no good and I have found nothing else that does.

DR. A. L. CHUTE: I endorse for the most part what Dr. Quinby has said about the occurrence of stricture of the female urethra. Dr. Quinby said that those he sees are of large caliber. I have found this to be so to a great extent but I have seen some of very small caliber. I remember one of filiform size, which I cut with a Maisonneuve urethrotome. These strictures have usually followed the trauma of a hard labor where the urethra was injured by pressure under the symphysis. Such as I have seen have not been the result of urethral infections.

I heard a paper by Dr. Duke in Chattanooga last week that was very suggestive. He cited a number of instances where the ingestion of certain foods caused bladder irritation. If I remember rightly, there was one poor patient who could not take wheat without bladder irritation; most of the patients, however, were sensitive to the rather less common foods. His paper was very interesting and suggestive to me.

Another form of bladder irritation that Dr. Quinby has not mentioned is that occurring in certain thin, straight-waisted young women; they are usually very neurotic, but besides this a bismuth meal often shows a marked degree of intestinal ptosis with all the weight of their intestines resting on the bladder. Several patients of this type have improved under the postural treatment and exercises recommended by Dr. Goldthwait. This and the addition of fat seem to serve to keep their intestines from pressing on the bladder. Those people show no symptoms other than frequency and urgency, but they are often very miserable.

A condition I have seen occasionally is a little

fissure at the junction of the bladder and urethra which I think may be likened to a fissure of the anus. Overdistention has in some instances given prompt relief to patients who had had a lot of discomfort for some time.

DR. E. H. TROWBRIDGE: Dr. Quinby didn't mention a case which he saw with me in consultation, and I was anxious to have him mention that case. It happens to be my province to deal with the female bladder rather than with the male, and I have had two cases which have been the cause of great anxiety; the one I spoke of first, which Dr. Quinby saw with me, was also seen by Dr. Buerger, and he was unable to solve the problem. In both that woman and the second woman—the first was a married woman without children, the second, a maiden lady of 50—while I haven't been able to discover anything by the cystoscope to account for the severe urinary symptoms, I believe in what Dr. Chute says, "that in some of these intractable bladders you will find a little fissure."

We know a little crack on the finger will pain us terribly, and we know how a fissure in the anal region causes pain, and while we are not able to detect these little fissures in the bladder, it seems to me that a fissure is an explanation of the cause of the trouble; when the fissure is stretched then you have a relief. It seems to me that is the pathology in these cases. Seeing these women with the intractable bladders, it has been a source of worry that we are unable to give them the relief we might give them; as Dr. Chute has said, there is some little fissure.

I am more and more convinced that the cause of the trouble in these cases is some lesion like a fissure.

DR. R. F. O'NEIL: Among other things Dr. Quinby spoke of submucous fibrosis of the bladder. Last April I operated on a woman of 40 years of age who had had urinary symptoms for some time. On cystoscopy there was a distinct circumscribed reddened area in the mucous membrane which bled easily. I did a wide resection in this case. She made a good operative recovery and did well for some time with relief of the symptoms. The bladder capacity was good and the urine became normal. She came into the Out-Patient Department this morning and was seen by Dr. Crabtree, who said all her symptoms had returned, and that on cystoscopy there was a reddened area adjoining the trigone, and although the bladder capacity was nine ounces, she still suffered from pain and frequency. Whether I did not perform a sufficiently wide excision I do not know, but the result was not satisfactory. Last winter in Washington at a meeting of the Genito-Urinary Association, Dr. Braasch of Rochester spoke of the employment of fulguration instead of excision. I believe that is the tendency in the handling of these cases.

DR. GEORGE O. CLARK: I should like to add my appreciation to that of the previous speakers with regard to the excellence of Dr. Quinby's paper.

To the extravasical causes of dysuria touched on under the heading of fibroids, I will add the case of a patient who gave me no opportunity for study previous to operation. There happened to be an acute retention of urine due to a fibroid of the cervix, so large that it almost filled the pelvis. On examination the obvious cause of this retention was compression of the urethra by this fibroid. Immediate abdominal hysterectomy afforded prompt relief. It was impossible to catheterize the bladder prior to operation under ether. As far as I could ascertain from such history as I got, the patient had complained, prior to the acute retention, of frequent dysuria and of some difficulty with her bowels. It is of interest to note that the acute emergency took the form of acute urinary retention rather than acute intestinal obstruction. This patient was about 50 years old, an inmate of the Medfield State Hospital for the Insane.

DR. F. A. PEMBERTON: I have seen cases like that which Dr. Keefe spoke of. They occur in women at and past the menopause, and you will find that the urethra is atrophied, cord-like, and thickened. The bladder capacity is small, holding three to six ounces; and they frequently have a residual of a few drams to an ounce. Dilatation of the urethra relieves them for eight to nine months and then the trouble recurs, and they have to be dilated again. The urine is normal and there is no sign of inflammation except an occasional trigonitis which can be relieved with silver nitrate.

DR. A. R. SAWYER: Dr. Quinby's paper brings to mind that in 1919 I had a case of a married woman, 48 years of age, who never had any children.

For over ten years she had been troubled with very frequent urination, hardly able to control the urine at all. In fact, she had been a slave to her bladder, being unable to attend church or theater. She had been under the care of several physicians, and finally consulted a general practitioner, who told her she had a chronic condition and nothing would help her.

Cystoscopy showed an injected trigone but with apparent normal bladder capacity on injection. Applications of nitrate of silver gave temporary relief, but I found that this had been tried by others.

Dr. Barney saw her in consultation and his report was practically the same except that the trigone, at his examination, showed small minute raised areas the size of the head of a pin, slightly injected. Nitrate of silver was applied in solution, and for some time she obtained relief, but eventually returned to the old condition. Finally, I inquired a little more

in regard to the bowel history, and although she had given a report of regular bowel movements, I found that the regularity was once in three days. I suggested that she use hot rectal flushes morning and night for the first week, bringing that down to once a day for the week following. Her report regarding bladder condition was very favorable. I finally put her on rectal irrigations twice a week. This she has followed constantly.

I heard from her two months ago. She has been able to attend the theater and church, and as long as her rectum is kept clear her bladder condition remains satisfactory.

I do not attempt to explain the pathology of this condition, but it is simply one of the many problems Dr. Quinby has spoken of that occur in the female.

DR. W. C. QUINBY (closing): I am much gratified at the breadth of the discussion which this sketchy paper has called forth.

Nothing must be taken too literally in this world, and Dr. Smith is quite right in saying that there rarely is such a thing as a primary cystitis. It doesn't do to teach medical students so, however. I always tell them that a cystitis is practically never primary, to prevent them from continuing to wash out a woman's bladder on the basis of a "cystitis," not having taken the trouble to make a more accurate diagnosis.

Cases of submucous infiltration of the urethra, we have seen, and I quite agree with him that nitrate of silver or nitrate of silver plus moderate dilatation by the same principle of treatment used in the male, is efficacious.

I had a case similar to that reported by Dr. Keefe. They may recur. None of us can say that these chronic infectious processes will not recur at a more or less remote period.

The cases mentioned by Dr. Pemberton of women at or past the menopause with a small contracted urethra and thickened mucous membrane,—this type of case I have usually associated with a process which occurs with advancing years and which in other regions is called a kraurosis; that is, it is an atrophy of the tissues with a subepithelial sclerosis. I think we see this occurring in the urethra as well as in the vulval and vaginal tissues.

Dr. Chute's cases are all interesting and add to the subject.

It is perfectly evident why I didn't speak of Dr. Trowbridge's case. I haven't any idea what ails the woman; and I know of no one who does. The ailment is apparently not a neurosis or a psychosis; and I think Dr. Trowbridge agrees with me that she is pretty well balanced mentally notwithstanding the fact that she has had a long-standing difficulty.

The cases of the submucous or interstitial fibrosis of the bladder are exceedingly interesting. Those who were in Washington last April

were interested to learn that the process isn't always cured by an excision even though it be a wide one. There is considerable difference of opinion as to treatment. Dr. Braasch has used fulguration; others have used hydraulic distention; and Dr. Hunner has had good results with excision. The whole difficulty is due to the fact that we don't know what causes the condition. There is found on examination a chronic scarring of the bladder wall of unknown origin. If you excise it, I see no reason why it won't recur in the part of the bladder you leave behind. I think we can give our patients no real assurance even though we do excise it.

Dr. Pemberton's problem beats me. I don't know what ails a woman who is well neurologically but who loses water and in whom operation on the sphincter doesn't cure. Are these women really wet? Do they have to wear a napkin?

DR. PEMBERTON: Yes, they do.

DR. QUINBY: And they are all right when they lie down?

DR. PEMBERTON: Yes.

DR. QUINBY: Is it beginning tabes?

DR. PEMBERTON: The bladder capacity is normal.

DR. QUINBY: The tabetic bladder capacity is plus normal.

DR. PEMBERTON: They are full when they have ten ounces.

THE CHOICE OF PYELOGRAPHIC MEDIUMS.

BY ROGER C. GRAVES, M.D.,

AND

LEO M. DAVIDOFF, M.D., BOSTON.

(This original paper published in *Jour. A. M. A.*, Jan. 20, 1923, lxxx, 168-171.)

Abstract.—Within recent years sodium bromid and sodium iodid have been generally accepted as the most satisfactory pyelographic media. The bromid solution has been more widely used and is now employed in the Boston clinics.

As a result of a long experimental study it has been learned that animal bladders filled to the point of moderate tension with 25 per cent. sodium bromid, suffer serious damage. The ill effects are marked by extreme edema, with thrombosis of blood vessels, and these changes are found to be due to the great hypertonicity of the solution. The lesions persist for at least 48 hours.

Further experiments in which the concentration of the bromid was reduced, determined the fact that a 10 per cent. solution is practically innocuous. Such a solution, however, is unsatisfactory from the standpoint of x-ray density. A 14.56 per cent. solution of sodium iodid was then tested, isotonic with 10 per cent. bromid and therefore equally lacking in the harmful effects of hypertonicity. Its heavier molecular

weight gives it very satisfactory opacity to the Roentgen ray. We learned, however, that the margin of safety can be made still greater and that 12 per cent. sodium iodid can be employed. In this concentration it is now in routine use in the clinic of the Peter Bent Brigham Hospital. Compared with sodium bromid, it represents a reduction in hypertonicity, from that of a 25 per cent. solution to that of an 8 per cent. solution—a considerable advantage.

In conclusion, it is felt that because of its great hypertonicity, 25 per cent. sodium bromid is an irritant which should not be used in pyelography. This work and that of Cameron warrant the opinion that sodium iodid in 12 per cent. concentration is the best available pyelographic medium.

DISCUSSION OF DR. GRAVES' PAPER.

DR. R. F. O'NEIL: How about the cost?

DR. R. C. GRAVES: We use less of this sodium iodid—8 per cent. solution—so that it balances the cost of 12 per cent. sodium bromid solution. The cost of making pyelograms is about two cents per 10 c.c. of fluid.

DR. R. F. O'NEIL: Have you ever cystoscoped where a cystogram has been taken and noticed any edema? I have noticed vesical irritation but have never seen anything visible to the eye.

DR. R. C. GRAVES: I think I have never cystoscoped a patient soon after a cystogram. I think you might see changes described, but I have never seen irritation.

DR. W. C. QUINBY: I have never seen it in the bladder but I have seen changes circulatory in character and also hyperemia as in cases in which you do a pyelotomy for stone the day after you make a pyelogram. That is with the older solutions, but not with this one of Dr. Graves'.

Adjournment.

SOME OBSERVATIONS ON INTESTINAL OBSTRUCTION.

BY JOHN W. LANE, M.D., BOSTON.

IX obstructions within the abdomen, including all due to external hernias, the onset is almost always marked by acute and sudden abdominal pain, which may or may not be referred to the actual site of the ileus, very shortly followed by vomiting of *gastric* contents and by a varying interval during which there is no vomiting. The facies and general appearance of the patient soon show that something unusual is going on in the abdomen.

The text-books state that fecal vomiting is a diagnostic sign of intestinal obstruction. That is true, but if the obstruction is low down in the large intestine, fecal vomiting often does not manifest itself for several days after the ob-

struction begins; on the contrary, if the obstruction is high in the small intestine, this symptom may come on rapidly. But the important point is that, in low obstruction, fecal vomiting is an end symptom in most cases and when present operative interference is likely to have a fatal result; because the poisonous contents of the intestine, whether they be histamins or not, have so entered the general system that the patient has no chance, even after obstruction has been relieved by operation.

A similar statement may be made of distention, which also may occur late in a case of obstruction, especially if its cause is low in the colon.

Another misleading symptom is the presence of bowel movements. If the obstruction is high up, there may be several bowel movements after the onset of the obstruction.

As a recital of some of the clinical cases in this series makes my points clearer, I wish to report in detail several of them.

CASE 1. August 8, 1921. M. M., female, age 19, student in Physical Culture. St. Margaret's Hospital. *Family History*: Of no importance. *Past History*: About five years ago suffered an attack of pain in abdomen diagnosed as appendicitis but was not operated. *Present History*: About two weeks ago complained somewhat of pain in lower right abdomen and vomited once. Three days ago had more pain, followed by vomiting. This pain disappeared for a few hours and did not recur until this afternoon, and for the first time was then associated with tenderness. *Physical Examination*: Negative save for marked tenderness in right iliac fossa. There was no demonstrable muscular spasm. There was, however, marked blanching of the skin of the upper and lower lips and the tongue was covered with a grayish coat. *Treatment*: A diagnosis of acute appendicitis was made and immediate operation accepted. *Operation*: McBurney incision. The appendix was hanging over the brim of the pelvis and was extremely adherent. It was freed with some difficulty and found to be enormously swollen, being almost an inch in diameter. It was red and tense. It was removed and the abdominal wound was closed in layers without drainage. *Subsequent History*: For two days after operation patient did well, but about 50 hours after operation she began to complain of pain in the left iliac fossa. For two days she vomited frequently, but always stomach contents mixed with bile, and during this period her bowels moved with enemata, good results of fecal matter and gas being obtained. On the fourth day after operation it was observed that the abdomen was distended on the left side and that there was increasing tenderness at left iliac fossa. A diagnosis of intestinal obstruction was made and operation advised. *Operation*: August 11, incision made through left rectus muscle. On opening the abdomen

there appeared a very much reddened and distended loop of small intestine, and in the pelvis some collapsed small gut was seen. Following the distended gut downward a band one-third inch in diameter was found completely constricting the gut. The band was divided and the obstruction was at once relieved. The abdominal wound was closed in layers and the patient made a good recovery from ether.

Immediately following the second operation patient did very well having normal bowel movements and no vomiting, and no distention. On August 15, four days after the second operation, she was seized with sudden, severe, sharp pain, referred this time to epigastrium, and she vomited soon after. When seen by me about eight hours later the abdomen was much distended and extremely tender on left side. It was evident that patient was obstructed again and she heroically accepted her third operation within a week.

Operation: August 15, the second operative wound was reopened. Small intestine presented much distended, and rapid search revealed a complete twist of the lower half of the mesentery of the small intestine. With great difficulty and much handling the volvulus was untwisted. There was some plastic exudate on the bowel and a dark bloody fluid in the pelvis. A small cigarette drain was inserted to pelvis and the wound closed, save for drainage site. August 16th, during the night of the third operation, patient had a large bowel movement, although there was still some distention. About 4:30 p.m., on August 16, about 28 hours after third operation, patient vomited a large amount of bile-stained fluid, and examination showed the epigastrium enormously distended. A diagnosis of acute dilatation of the stomach was made and the stomach lavaged. Much gas was obtained and green fluid with undigested food particles. After three washings water returned clean and 1½ oz. of sol. of epsom salts was left in the stomach. During the night patient had four large bowel movements. In spite of frequent bowel movements patient remained greatly distended until August 22, when culture of "Bacillus acidophilus" was given, following which distention rapidly subsided and patient proceeded to make a normal convalescence and was discharged a week later in good condition. She is today in apparently perfect health.

This case is unusual and shows that fecal vomiting and distention do not come on rapidly, especially if the obstruction is low.

CASE 2. August 7, 1920, C. H. O'C., age 44, pharmacist. Seen with the late Dr. J. H. Murphy of Dorchester. *Past History:* This patient, all his life, up to his present illness, had been a very active man, with no illness he could remember. *Present History:* About 7 days ago bowels became constipated, and for a week, in spite of frequent doses of salts, did not move.

He vomited once the first day of the constipation and once since. There was no abdominal pain at any time. *Examination:* The abdomen showed very little distention, no spasm, no tenderness, and no masses could be felt. He was seen again on August 11, with Dr. Murphy. Patient had been passing gas since last visit but had had no real bowel movement. Distention had increased and patient is vomiting once a day in small amounts. There is still no pain. On this day x-ray examination was advised and the roentgenologist reported that the barium column stopped at a point about 2 inches above sigmoid. Patient consented to operation, a diagnosis of obstruction from carcinoma being tentatively made.

Operation: August 11, at St. Margaret's Hospital, a left rectus incision. Exploration revealed an annular mass completely obstructing the colon about 2 inches above sigmoid. On account of the distention present no attempt at resection was made and a cecostomy was done, fecal drainage being immediate and profuse. On August 31, patient's condition being good, incision through left linea semilunaris was made. The colon was mobilized and about a foot of intestine resected 6 inches above and below the growth and a lateral anastomosis done. The operation was difficult and attended with much shock. The growth was reported by Dr. Mallory as being adeno-carcinoma. About September 17, the last operative wound began to discharge fecal matter and the patient was discharged to Dr. Murphy, with cecostomy draining well and slight fecal discharge on left. Up to June 19, patient felt well and gained steadily in weight and was attending to business. On that day he noticed that there was a "lump" at the cecostomy wound which increased in size. Examination on June 21 showed eversion of intestine, making a red mass size of large orange. It was easily reduced into abdomen and a wick introduced to hold the intestine in place. June 27, protrusion of intestine has not recurred. Patient was then advised to have cecostomy closed, but demurred. September 28, patient was suddenly seized with great pain in cecostomy wound and immediately a large protrusion occurred there. This caused great intra-abdominal pain, fainting, nausea, and vomiting.

Examination: Pale, pulse thin and poor. From right colostomy wound is a protruding red mass about size of a large grapefruit, apparently mucous membrane of intestine, and within this is felt another mass, apparently coils of intestine. Immediate operation was advised and accepted. *Operation:* September 28. All attempts to reduce mass under ether failed. An incision was made downward, prolonging old cecostomy wound. The bulging mass was opened at its lower angle and was found to be the wall of the cecum pushed outward. Behind this was a loop of about 2 feet of strangulated small intestine, almost black. This was returned to ab-

domen. The cecum was then freed from its abdominal wall attachment and closed tight with a double row of Lambert sutures of Pagenstecher thread, and was returned to the abdominal cavity, a small cigarette drain being inserted. The patient made a normal convalescence with no leakage from cecal wound and left the hospital in two and one-half weeks. In February, 1923, he reported as being all healed on right side, having one movement a day from the wound at the descending colon and one normal bowel movement a week. Has gained 15 pounds since last operation and feels well.

This case is extremely unusual in that the original obstruction was associated with no pain and that the first symptom of the carcinoma was sudden obstruction. There was no prior history of alternating constipation and diarrhea so characteristic of carcinoma of the large intestine. The case further illustrates that even after being practically completely obstructed for ten days there was no fecal vomiting. It also is an example of a unique manner of obstruction, *i.e.*, strangulation by evagination of intestine,—what perhaps might be called an external intussusception.

CASE 3. June, 1920. T. McQ., referred by Dr. J. P. Treanor. *History:* This patient was operated on in June, 1920, for acute cholecystitis, and cholecystectomy done because cholecystectomy was thought to be inadvisable. Fifty gallstones were removed from gall-bladder. A year later, in June, 1921, he was suddenly seized with excruciating pain in region of sternum, followed by vomiting. Pain had persisted without diminution for three hours, when he was seen by me. On examination it was apparent that he was in great pain and there was extreme tenderness in epigastrium and entire abdomen was board-like from spasm. A diagnosis of probable acute perforation of gastric ulcer was made and immediate operation advised.

Operation: June 28, 1921. On opening the abdomen there was escape of gas and there seemed to be excess of intra-peritoneal fluid. There were many adhesions of omentum to peritoneal scar and also to gall-bladder and duodenum. No perforation of duodenum or stomach could be made out after prolonged search. The pancreas was enormously swollen at its head but no fat necrosis could be demonstrated. There was marked edema of the ligament of Treitz. The gastro-colic omentum was opened but no blood was seen or other fluid in the lesser omental cavity. There was no evidence of posterior ulcer of stomach. The opening in the gastro-colic omentum was closed with plain catgut. The gall-bladder was freed from adhesions and opened. It contained black bile, evidently under pressure, and a piece of black gravel about one-third inch in diameter and very irregular and jagged in outline. Nothing could be palpated in the bile ducts or ampulla of Vater. A

cholecystostomy was made again because gall-bladder was impossible to mobilize and its removal seemed a hazardous undertaking on account of patient's obesity. The wound was closed in layers, except for site of drainage. Patient was considerably distended, especially in upper abdomen, 48 hours after operation, but vomited very little; and then only a mouthful, at a time, of fluid recently ingested. July 6, patient vomited a considerable amount and, while straining, a small piece of omentum extruded through wound at drainage site. This was reduced into abdomen and held by a wick. July 7, patient vomited again and everted about 2 feet of small intestine, which became strangulated by the abdominal wound. One loop had escaped from underneath the swathe and was resting on the bed sheet when I saw him. Immediate operation was done and loops returned to abdomen with difficulty and wound closed with through and through sutures. The patient made an uneventful convalescence from this time on and is now at work and enjoying good health.

This case is interesting because the patient probably had an obstruction due to a partial volvulus after operation, which was spontaneously relieved by the bursting open of the wound. In addition, he probably suffered from an acute pancreatitis, which was relieved by drainage of the gall-bladder.

CASE 4. July 7, 1919. Wm. M., age 56, seen for Dr. M. J. Cronin. *History:* Entirely negative, save for a swelling in the left groin, which becomes larger in upright position and disappears in recumbent position. Pain is annoying. *Operation:* On July 10 a herniotomy was done without difficulty. On day after operation patient complained of severe pain in lower left abdomen and an enema was returned, stained with blood. Rectal examination was negative. Patient gradually distended; enemata were without result. While there was no fecal vomiting, obstruction being evident, operation was done on July 14. A left rectus incision was made and distended coils of large intestine, as well as small, presented. There was bloody fluid present, and gas and feces were exuding from a perforation in the sigmoid above a mass in the sigmoid flexure, which appeared to be an annular carcinoma, obstructing lumen of gut. Using the perforation as an opening, a sigmoidostomy was done, but patient failed to react and died about 36 hours after.

This case is interesting because, as in Case 3, there was acute obstruction by a carcinoma and this obstruction was the very first symptom calling attention to the cancer. Careful questioning of patient and relatives could elicit nothing of prior symptoms. There was no autopsy permitted and the diagnosis could not be proved by microscopic examination but, judging from

experience in other cases, I have no real doubt that the diagnosis was correct.

I wish to emphasize again the fact that in this case there was no fecal vomiting, although the obstruction probably was of four days' duration.

CASE 5. Obstruction from inspissated feces. April 20, 1919. Mary G., 5 years. Seen with Dr. J. F. Fennessey. *Past History:* This child's history was negative, save for an attack of anterior poliomyelitis two years previously, from which there had been almost complete recovery. *Present History:* Two days ago began to have severe pain in the abdomen, referred to middle line and directly above the pubis. Pain was followed by vomiting and constipation. Cathartics and enema gave no result. *Physical Examination:* Examination negative, save as follows: There was moderate abdominal distention but no spasm. There was considerable tenderness over the pubic region; no masses palpable. There was also slight tenderness in the appendix region. Examination of the rectum showed a large inspissated, hard bolus of feces packed tightly in the rectum and obstructing it completely. With much difficulty the bolus was broken up and an oil enema given, followed by suds enema; a large movement resulted and several liquid ones in rapid succession, and pain and vomiting immediately ceased.

I have seen several cases similar but not obstructing and all have had severe abdominal pain referred to the suprapubic region. It illustrates the necessity of that often forgotten stunt—the examination of the rectum in all abdominal cases.

CASE 6. October 26, 1919. Mrs. J. F. M., age 51. Seen with Dr. H. C. Towle. *Past History:* Negative save for the fact that patient had for 15 years a left inguinal hernia and that she had given birth to 8 children, all alive and well. *Present History:* Four days ago began to have sharp pain, "cramp like" in character, in abdomen; referred mostly to epigastric region and radiating downward and to both the right and left iliac fossae. Yesterday pain was much worse. Nauseated but no vomiting. *Physical Examination:* W. D. & N., pulse 100, temp. 98, looks sick, tongue heavy white coat. The abdomen was greatly distended and very tender over the right lower quadrant, where there was much spasm. In the left inguinal region was a small tender swelling, not fluctuant or tense, but irreducible. *Operation:* Incision made over hernia mass, sac of which was opened and found to contain omentum. Sac was freed, transected, tied off and removed. There was no bowel in sac. Ferguson operation. No cause of obstruction being found, a right rectus incision was made. The cecum was enormously distended, and constricted by a long appendix encircling it and closing its lumen completely. The appen-

dix was dissected free and removed. Further exploration showed no abnormality save a tense gall-bladder in which no stones could be felt. Its walls were not thickened and its color was normal. Patient made an uneventful convalescence and today is well.

In this case with complete obstruction for four days there was no vomiting at all. It is also unusual, in that the obstruction was caused by the appendix.

CASE 7. This case I wish to report simply to emphasize one fact. November 29, 1921. Mrs. McL., seen with Dr. J. P. Treanor. *History:* Patient had been well up to six months ago when suddenly had severe pain in left lower abdomen, was constipated for two days and vomited several times. Relieved after a day by cathartics and enema and since that time has been well until two days ago. At that time became constipated and had pain in epigastrium. This morning took a dose of castor oil, which failing to work was repeated four hours later. This afternoon she gave herself an enema and immediately after was seized with very severe pain in epigastrium and vomited and vomited steadily until 11 P.M., when seen by me. The vomitus was reported as being reddish in appearance. She had after taking enema three bowel movements with no relief of pain. Examination of abdomen showed enormous distention and apparently a large loop of intestine could be palpated in right iliac fossa. No visible peristalsis. Immediate operation was advised and accepted. *Operation:* A left rectus incision was made. On opening abdomen an enormously dilated transverse colon presented and in the lower abdomen the small intestine lay entirely collapsed. The cecum was enormous in size. Passing rapidly downward along the colon the distention gradually diminished until at the sigmoid flexure was found an annular growth, evidently carcinoma. Below this the sigmoid was collapsed. It was impossible to return the dilated colon within the abdomen on account of its enormous distention so a hollow needle was introduced to tap the gas, without result. A purse string suture was introduced and a small incision made in the colon. The colon then collapsed and some frothy fecal matter escaped on the walling off packs. The purse string was then tied and the gut was wiped off carefully with salt solution and returned to abdomen and wound closed. A cecostomy was then done, through a McBurney incision, and a Mixer tube inserted through which about two quarts of liquid fecal matter soon drained. Patient made a normal convalescence and intestinal contents drained through cecostomy wound. Secondary operation for excision of the growth in the sigmoid was performed on December 30th and growth reported as adeno-carcinoma. End to end anastomosis was done. Patient made a good convalescence save for a double phlebitis. She is now well

and 15 pounds heavier than ever and feels perfectly well.

I report this case merely to illustrate the point that although there was intestinal obstruction at the sigmoid three bowel movements occurred after the onset of the obstruction. Note should also be made of the fact that the entire small intestine was in a state of collapse.

It is noticeable that in all these cases a sign often mentioned, namely, "visible peristalsis," was conspicuous by its absence. I could go on citing cases in detail but space does not permit.

In conclusion let me emphasize the following:

1. Fecal vomiting is very likely to be an end symptom of intestinal obstruction.
2. Bowel movements do not preclude the presence of intestinal obstructions, and the higher the obstruction the more likely for such movements.
3. Visible peristalsis is rarely seen.
4. In high obstruction operation must be done very early to be successful.
5. Continuous abdominal pain followed by increasing distention means intestinal obstruction, mechanical or paralytic due to peritonitis.

ONE-CHILD STERILITY.*

BY DONALD MACOMBER, M.D., BOSTON.

The subject about which I am going to speak to you tonight is one-child sterility. I have chosen it because it presents an aspect of the general subject of sterility which is naturally of greater interest to you as obstetricians. It must be kept in mind, however, that it does not represent a separate entity but, as I have just said, merely a new aspect of the general subject. The term has been rather loosely employed to cover all cases of sterility where there has been one or more full term pregnancies and this is the sense in which I shall employ it this evening. This paper is based on a study of the records of 76 such cases, of which 61 were female sterilities, 9 male sterilities and 6 due to trouble on both sides. It is of course realized that this is an extremely small number of cases on which to base any definite conclusions whatever and no such attempt has been made in this paper, but the consideration of these cases does, I think, permit us to draw conclusions as to general tendencies which are extremely suggestive.

Let us first take up the sterilities of male origin. In view of the fact that there seems to be a pretty general impression among the profession that once fertile, always fertile it may be somewhat of a surprise for you to learn that 20 per cent. of these cases showed trouble with the male. We believe, furthermore, that this percentage should be much larger, per-

haps even as high as 40 per cent., the reason being that many male sterilities would first consult a genito-urinary surgeon and would never come to our attention as gynecologists. The causes of trouble on the male side in our small series of one-child sterilities are three—first, congestion; second, cases where there is systemic disease; and, third, cases of physiologically lowered fertility. Practically speaking there are no acute infections, such as gonorrhoea, which plays an important part in the etiology of male sterilities in general. If infection is present at all, as it sometimes is in the prostate or seminal vesicles, it is of a mild chronic nature and closely associated with the congestion of the particular region which first allowed it to gain its hold. The essential thing then is the chronic congestion of prostate, vesicles or testicles, a congestion which may, or may not, be accompanied by a mild degree of infection. We had among the 15 cases with trouble on the male side three which showed chronic prostatitis.

The second group includes cases of systemic disease which had presumably appeared since the previous pregnancy. In a way these cases might be classed with the third group of lowered fertility, the only difference being that in these the specific cause for the lowering of fertility was apparent. In our series of 15 cases there were two cases of diabetes and one of syphilis. It is, of course, well known that tuberculosis produces similar results; it so happened, however, that no cases of tuberculosis appear in our one-child sterilities. The remaining nine cases could only be classed as physiologically lowered fertility as shown by abnormalities of the spermatozoa, but we were unable to assign any specific cause for these changes. It is, however, our opinion that the sedentary life and business worry of modern city life are two of the most important exciting causes. This subject of lowered fertility seems to us of such importance that I shall discuss diagnosis and treatment at some length.

These cases are often of rather low fertility constitutionally and although general physical examination is as a rule negative there may be some of the stigmata of under-development as with similar cases in the female. On local examination it is not infrequent to find the testicles small and lax though this is often a purely temporary condition. Examination of the semen shows decreased number of the spermatozoa together with decreased vitality. There are often spermatozoa with smaller heads than normal or showing variations in shape and size. The semen may also contain abnormal elements, such as excess of the so-called starch bodies, leucocytes, red blood cells or mucus. The presence of these abnormal elements may mean only a simple congestion of the prostate, but where the amounts are excessive and particularly where the number of leucocytes is large the probability is that there is also an infective process. The

*Read before the Obstetrical Society of Boston, January 23, 1926.

sexual history often shows a low amount of desire and there is sometimes actual difficulty in completing the act of coitus. This does not, as a rule, go on to actual impotence, however. These patients often find great difficulty in keeping appointments with us for examination after coitus; in fact a diagnosis of lowered fertility in the male becomes almost assured after more than one such failure. The chronological marital history is also often very suggestive. With normal couples the first child after marriage is almost without exception conceived after from 3 to 6 months, or earlier, and not infrequently in spite of the use of some preventive method. With these patients the single conception that has taken place has usually occurred after one or two or more years of married life. They often give the history that it occurred after a vacation or when in particularly good physical condition from one cause or another.

One or two typical histories are of interest in making these points clear. In the first case husband and wife were both normal and had had two children (it should also be noted that the husband had had two other children by a first wife), but they were extremely anxious to have another. More than six years went by without a pregnancy and then there was a miscarriage at six weeks. At the time of the second marriage and when the two children were conceived the man was well and attending to his business easily. As time went on he was advanced to more and more responsible work until towards the end of this period he was in charge of the efficiency and future policies of a business of national importance. He worked longer and longer hours and got less recreation. As often happens in these cases of physiologically lowered fertility there was a chance pregnancy but it ended, as they frequently do, in the early death of the foetus with subsequent miscarriage. Shortly after the time of the miscarriage he had a number of attacks of such serious digestive trouble that he was obliged to greatly curtail his working hours and to take a large amount of daily recreation in the outdoor air. His condition improved greatly and less than one year after making this radical change in his way of living his wife conceived and the pregnancy went through to term.

The second case is of a somewhat different nature. The man had been a college athlete of considerable ability and after leaving college had started in to learn a business from the bottom by going into the factory as laborer and then as foreman. The work was of a character requiring tremendous physical exertion and often carried on in the outdoor air. Just before marriage he was taken into the executive side of the business and changed from very active work to a typical sedentary indoor life. The marriage was sterile for more than two years and it was not until he had for a period of some months gotten back into hard training that his

wife conceived for the only time. After this short period of hard physical work which also happened to correspond with a longer vacation and more freedom from business worry than he had before experienced he again returned to the office work. Then came the war with greatly increased responsibility and worry especially since the business of which he had by this time come to be manager was largely the manufacturing of munitions. Even since the war his responsibilities and sedentary life continue and his semen has remained poor. This patient will probably remain of such low fertility that further children are not to be expected unless he is able to take a long vacation and again get into hard training condition.

As you will see from the difficulties in exactly diagnosing cases of male sterility and from the many factors which enter into them as illustrated in these rather typical case histories prognosis is far from being an easy or a simple matter. There is also an additional consideration which renders the giving of an accurate prognosis an even more difficult matter; and this is that the prognosis of any sterile mating depends on two factors. One is the nature and severity of the causative lesion found in the individual who is responsible for the sterility, and the other is the degree of fertility of the other partner to that mating. It is important, therefore, to make a distinction in speaking of prognosis as to whether the point to be considered is the success of a given mating, or whether the objective is improvement in the fertility of an individual. For instance, there is no question but that the fertility of a male can be raised except in the most hopeless cases where there is absolute aspermia, but whether such raising of fertility will cure the sterility of the mating depends to a large degree on the fertility of the individual female with whom that male is mated. When we come down to actual cases in the male the prognosis for individual improvement varies with the success with which a given lesion can be treated. This treatment and the subject in general belongs in the province of the genito-urinary surgeon. We are here concerned more with those cases where there is a "lowered fertility" but no specific lesion. The prognosis in such cases is often excellent, but varies considerably with the degree of reduction, the age of the patient, and his ability to follow out instructions. The treatment can be characterized by saying that it includes all methods to get the patient into good "breeding condition."⁷ These methods are three—first, diet; second, exercise; and third, sufficient periods of mental and physical relaxation. The diet should not be deficient in any important element and should contain an abundance of protein and calcium. These latter are perhaps best supplied by liberal amounts of milk and eggs. When taking such a diet a fairly large amount of vigorous daily exercise

(in the outdoor air if possible) becomes necessary. You see the diet and exercise are quite analogous to those prescribed for training athletes; the only difference is in degree. Daily bathing and attention to proper breathing are important aids in raising the general condition. The last item is sufficient relaxation. This is particularly important for nervous high-strung individuals, and forms a most necessary part of the daily régime in all these cases.

Let us now turn to the female side. There were in all 66 cases in which the sterility could be laid in whole or in part to the female. As would be expected the causes of these sterilities were the same as for female sterilities in general. In a recent paper* I made an analysis of some 500 cases and was able to classify all causes under four general heads—first, there was the inflammatory group, which included closed tubes, tubercular tubes, endocervicitis and endometritis. It comprised 30 per cent. of the total. Second, came the congestive group, and here were included displacements such as retroversion, new growths, such as fibroids, lacerations and simple congestion. This group made up 23 per cent. of the total. Third, was the developmental group, consisting chiefly of cases of so-called antelexion, but including also double uterus and infantile uterus. The total here was 24 per cent. The last group I called the ovarian group, and this included cases where the ovaries were filled with retention cysts or with retained corpora lutea and cases where age, diet, etc., had affected the ovarian function. This group made up 23 per cent. of the total.

This method of classification is a useful one and furnishes us a convenient method of comparing one-child sterilities with sterilities as a whole. The differences in percentages is quite striking. For instance, group one, the infective group, becomes 29 per cent., as compared with 30 per cent., practically unchanged, but group two, the congestive group, becomes 55 per cent., as compared with 23 per cent., more than double. The third, or developmental group, naturally shrinks to nothing since all these cases have had at least one full term pregnancy and likewise the ovarian group is reduced from 23 per cent. to 15 per cent. Keeping in mind that these figures are not to be interpreted too closely because of the small numbers and the broadness of the classification, still I think it is very striking how the second group has increased in size. When the various elements which make up this group are analyzed it will be seen that lacerations of various degrees make up nearly one-half of the total 55 per cent., and the rest are mostly cases of congestion associated with subinvolution or great relaxation of the pelvic supports. The differences that we have found between one-child

sterilities and sterilities in general are, you see, as might have been anticipated, largely the result of the fact that these patients have been subjected to the accidents and after-results of labor.

In general this side of the question needs no further elaboration, certainly not before this audience, but there has been so much misunderstanding in regard to the term congestion, to what causes it and to the sterility resulting from it that a few words of explanation may not be out of place.

Congestion is defined as "an abnormal collection of blood in a part or organ. It may be active or passive, atonic or inflammatory." Active congestion is of course a normal occurrence in these organs—just preceding the onset of the catamenia, during intercourse, and to a certain extent during pregnancy; but where this condition from one cause or another tends to become chronic or where, due to interference with the venous circulation, there is chronic passive congestion, changes occur which are decidedly abnormal. On inspection there is a reddening of the cervix if the congestion is active, or a bluing if it is passive. There is often visible a large amount of clear normal appearing cervical secretion hanging from the external os. Under the microscope this will be seen to contain very few leucocytes. If the congestion is of longer duration the secretion may be more stringy and contain many more leucocytes. It is irritating and there is apt to be a beginning erosion of the cervix. On bimanual examination the uterus is large and heavy; occasionally it pits on pressure. The ovaries also may be tender and somewhat enlarged and not infrequently a distinct pulse can be felt in the broad ligaments. Now what is the cause of this condition? The first, and by far the most common, cause is to be sought in irregularities of the marital habit. Here over-frequency or the suppression and incompleteness of the act may lead to an active engorgement which as time goes on tends to become chronic. The next most common cause is to be found in abnormal positions of the uterus—either retroversion or prolapse—which interfere with the normal venous return. The third most common is the occurrence of fibroids or other new growths which by their presence increase the blood supply or by their size and position interfere with the normal circulation.

If long continued, congestion tends to cause changes in the tissues themselves, such as hypertrophy of the cervix or of the uterine mucosa; but it also renders the tissues more susceptible to the inroads of infectious organisms of various kinds which are always present in the vagina or are introduced in coitus. Therefore, endocervicitis and salpingitis of non-venereal origin may often trace their origin to a neglected congestion. Anyone who has examined a woman in the early weeks of marriage

**BOSTON MEDICAL AND SURGICAL JOURNAL*, Vol. 157, No. 11, pp. 297-400, September 14, 1922.

will appreciate the importance of this subject. The wonder really is that so few destructive infections do occur.

Perhaps a word on the way in which congestion interferes with conception and therefore becomes a factor in the causation of sterility may not be out of place. There is as, of course, you all know, a normal post-coital flow of clear secretion from the cervix. Where congestion is present this flow may be so extreme that the spermatozoa are absolutely unable to make head against it; so that after a few hours none are found at all. Contrast this with the normal where spermatozoa may be found in active motion six or more days later. The second way is by the prevention of nidation since the uterine mucosa gets into such an abnormal condition as to be unable to receive or nourish the developing embryo.

The prognosis of one-child sterility in the female is on the whole better than for sterility in general; and when infected or closed tubes are excluded becomes very good indeed. Our figures on this series show better than 50 per cent. on all cases and where the bad tube and extensive fibroid cases are ruled out 70 per cent. or better.

The treatment is of course symptomatic—or rather varies according to the diagnosis. For the various lacerations, displacements and pathologic conditions in general, the special treatment required is obvious. For congestion the principal thing is to remove the cause and then with long continued depletion relieve the effects already produced. The treatment of lowered fertility in the female is not so plain. In general it follows the lines laid out for the male and includes attention to diet, exercise and rest, or in a word anything which will improve general condition. Because of the necessity for the function of menstruation the anaemias, even of slight degree, are much more important than in the male, and should always be considered in the treatment of any lowered fertility.

Enough has been said to indicate the nature of the problem and to show that "one child" sterilities are very little different from other cases of sterility. The chief difference comes from the addition of the accidents of labor to the causes which hold for cases of sterility in general. The functional variations from normal caused by congestion or lowered fertility are equally important; they may, and usually do, enter into every case in greater or lesser degree and no examination or opinion is complete which fails to take them into consideration.

In conclusion let me emphasize again the importance of examining the male and let me urge you to make in these cases as careful and painstaking investigations as you would in making the diagnosis in any case of sterility.

THE HOUSEHOLD NURSING ASSOCIATION.

BY ROBERT B. OSGOOD, M.D., BOSTON.

THE evolution of the trained nurse has been rapid, until she has become an essential factor in the practice of medicine. In certain respects her evolution has been more rapid than that of medical practice. A nursing gap has been left which must be filled if the profession of nursing is to be satisfactorily complementary to the profession of medicine and is to adequately serve the sick. This gap is evident, not only to the lay public, but to medical foundations, medical educators, and to superintendents of training schools. At the present moment the Rockefeller Foundation and the American Medical Association are giving this matter closest attention, and among any large group of medical men who care for private patients, there is a unanimity of opinion as to the existence of this gap. It seems to be quite clear that there is a need which is becoming more and more articulate for a type of nurse who is trained, but not supertrained; for a doctor's assistant who will carry out orders intelligently; and for an attendant who will fit into a simple home life and be willing and able to hold the baby if necessary, when she is not caring for her patient; perhaps even to cook a meal for the family or to dust the rooms. The weekly wages of our splendidly trained nurses are perhaps not too high, but they are often higher than the weekly salary of the head of a household whose wife or child is badly in need of the services of a nurse.

Undoubtedly this demand will be gradually, perhaps quickly, supplied by the establishment of shorter courses of training for a group of women who cannot afford the time or the expense of a two to four years' course in the theory and practice of medicine with what may be almost called the by-product of a training in the homely duties and art of caring for the sick. It should be more generally realized, however, that in a quiet yet thoughtful and sound way Boston has been striving in the Household Nursing Association to meet this demand, and actually has been meeting it, to the fullest extent of its capacity for the last ten years.

Mrs. Randolph Coolidge and Mr. Richards Bradley, with other public spirited citizens and a small group of physicians, established in 1912, with the help of the Thomas Thompson Trust and private subscriptions, a training school for attendants in Lynn. The school has continued until the present time to turn out small classes of attendants who had received first several weeks' training in cooking and domestic science, nursing technique and instruction in elementary anatomy and physiology, and who then later received practical training as attendants in hospitals. These pupils agree, before entering on their course, to accept in their private practice

supervision from a trained nurse to be supplied by the Household Nursing Association. This graduate nurse visits them at regular intervals in the home and assists them in carrying out the orders of the physician in charge of the case. It soon became advisable to move this elementary training school to Boston, and help from the Thomas Thompson Trust became by the deeds of this particular bequest no longer available. The Association went bravely on, however, as more women of better type began to apply for this training.

For the last two years the Association Headquarters and Training School has been at 222 Newbury Street, and under the presidency of Mrs. William W. Vaughan and an able Board of Directors, with Miss Katharine Shepard, R.N., as its superintendent, it has extended its work and accepted its broadening responsibilities.

Affiliations were made with the Collis Huntington Hospital, the Norwood Hospital, the Henry Heywood Memorial Hospital in Gardner, the Deaconess Hospital in Concord, the Winthrop Community Hospital, and the Robert B. Brigham Hospital, and most of these affiliations are still maintained. Post-natal care became an important demand, and affiliations with the Talitha Cumi Maternity Home in Jamaica Plain and the Evangeline Booth Maternity Hospital in Boston were entered into.

There has been developed also, at the request of physicians, a complete maternity service. Two graduate nurses are always on call for the confinement, and unlike the District Nursing Service, these nurses go to the case at an early stage of labor and remain during the critical period following labor. This nurse continues her supervision of the attendant when the case no longer needs the constant attention of a full trained nurse. The service has been established only a short time and needs support from physicians. It should receive this support, for it surely fills a gap between hospital care and district nurse care for those cases which cannot well afford the continuous care of a graduate nurse.

A preliminary course of six weeks is now given at 222 Newbury Street, in accordance with a standardized curriculum, followed by practical work in the above mentioned excellent hospitals. Recently the course, formerly of six months, has been lengthened to nine, in accordance with the recommendation of the Rockefeller Committee on Nursing Education. Before receiving their diplomas the attendants work six months on private cases, under the supervision of the Association's full trained nurses. During this time the attendants register with the Association Registry, but are not obliged to so register after they have received their diplomas, having been under observation for fifteen months and proved themselves fitted to receive this diploma. Fifty per cent. of those

receiving this training do, as a matter of fact, continue to register with the Association, and the Registry is now a little more than self-supporting. The cost of the training is by no means defrayed by the small fee for the course which the pupils pay, and the Association is still dependent upon private support to carry on its most helpful work. The Registry could employ many more attendants than the Association is able to train under its high standards with its present resources. This useful medical activity should surely receive the cordial support of the public it peculiarly serves and of the profession whose care of patients of small means it renders more successful and efficient.

PHYSICAL IMPROVEMENT OF STUDENTS AT CITIZENS' MILITARY TRAINING CAMPS.

BY J. R. KEAN, M.D.,

Colonel Medical Corps, U. S. A.; Corps Area Surgeon.

AN appropriation by Congress provides for nine training camps at various locations throughout the United States during the month of August under the supervision of the Army.

The improvement of the young men at these camps as shown by the reports of the medical officers having the care of them is quite extraordinary when the short time that they are under training is considered. By far the greater number of them are growing boys, the average age being about eighteen. The first advantage as regards their health is received before they arrive at the camp in the vaccination and immunization against typhoid fever, which is given to each candidate, the typhoid vaccine being furnished from the government laboratories at the Army Medical School in Washington. The great value of this protection is shown when we remember that in the mobilization camps of the Spanish War one-fifth of all of our young men came down with typhoid fever. This formidable disease has been practically abolished in military camps by immunization and the benefit for any young man is as great in civil life as it is for the soldier in camp.

Upon the arrival of the candidates at camp each is given a thorough physical examination by trained experts, including their eyes, ears, teeth and internal organs. Careful record is made of this examination and they are given advice as to the steps which should be taken to remedy the defects found to exist. Those who are found to be deficient in physical development or below standard in their mental progress are placed in special companies in which the supervision of each youth is more careful and the exercises and courses of instruction are suited to their special needs. The students also

are given instruction in personal hygiene and sanitation, in disease prevention and first aid. Especial attention is also paid to the importance of cleanliness, good habits of living, the care of the feet, and sex hygiene. This instruction is by lectures, demonstrations and moving pictures. For such students as appear at sick call additional practical advice and suggestions adapted to their individual needs are given.

The health of the students is better safeguarded in the camp than it would be at home. The water supply is beyond suspicion, the food is excellent and the dishes are sterilized after each meal. For those who become sick, excellent hospital facilities are provided, with the services of a trained nurse in serious cases.

To show the efficiency of this supervision it may be stated that in 1921 no case of contagious disease and no serious illness or injury developed among the 1300 students. In 1922 one case of mumps, one of chicken-pox and two of appendicitis developed among the 2400 men who attended that camp. It is also highly creditable to know that no case of venereal disease developed among them in either camp.

There was a steady gain in weight of nearly three pounds per man in spite of the vigorous exercise and the fact that those who were too fat lost weight. This gain of weight among 1586 of the men averaged five pounds apiece, while 491 who were too fat lost weight to the extent of 3.9 pounds each. In the case of 206 the weight remained stationary. But it is not in figures that one sees the gain to the men. It is by contrasting their comparatively slovenly carriage, pasty skins, lack-luster eyes and vacant faces, when they arrive, with the erectness, alertness, abounding health and purposeful faces that characterize them at the end of camp. During the 1922 physical examination the surgeons could, by the merest glance at their build and carriage, infallibly pick out the men who had attended the 1921 camp or had had other military training.

Parents often incur considerable expense to send their sons to summer camps where the advantages in physical, mental and moral training are much less than at these fine establishments, the advantages of which are offered gratis by the Government.

A PULMONARY SEQUEL OF INFLUENZA.

BY OLIVER H. STANSFIELD, M.D., WORCESTER, MASS.

THE purpose of this clinical note is to call attention to a pulmonary condition, occurring after apparently uncomplicated influenza or "grippe." Although called a sequel, the condition may be really an accompaniment in some cases of influenza. Some twelve examples have been observed.

The patient gives a history of having had,

some days, or as long as four weeks before, a not particularly severe influenza, and complains that, since then, he has been very easily tired, reluctant to put forth any mental or physical exertion, and has poor appetite for food. A persistent dry cough is also present.

On physical examination the tired appearance is obvious, as well as pallor. Preoccupation is usually quite noticeable. The lungs disclose rather characteristic signs. To percussion there is impairment over an area of some size, the impairment never advancing to dullness or flatness. A better description of this sign would be an increased resistance on percussion. The breath sounds over this area are feebly audible and seem to be broncho-vesicular in type. In a minority of cases, a few inspiratory crepitant râles are heard over the same region. The voice transmission is not greatly disturbed.

The lower lobe of the right lung is most commonly affected, yet in a few instances the left lower lobe has been the one involved, and usually the upper half of these lobes.

Low grades of fever, 99 to 101, not constant, have been detected, and evidently in relation to exertion by the patient during the earlier part of the illness. The pulse rate is apt to be a little accelerated, and the pulse of low tension.

In one case opportunity was afforded of comparing radiographic evidence with the clinical signs. The film showed a triangular area of increased density, based on the periphery of the lung and extending to the hilus, in the part of the lung yielding the physical signs.

The pathology of this condition has been considered as, possibly, a peri-bronchial infiltration. The lung changes described in B. pneumosintes experiments may be analogous states. It is very likely that secondary invaders are not responsible, but that they would find a fertile field for activity in the involved part.

Treatment has been rest in bed for several days, until the physical signs have disappeared and the patient evinces some desire to move. Subsequently, gradually increased exertion is allowed. Appetite has been allowed to improve with the general condition of the patient, though the temptation of choice and pleasant food is offered. For the cough, sodium iodide (0.32 gm.), thrice daily, with an occasional dose of codoin, seems sufficient.

The course of the disease has always been toward recovery, after recognition, so that no idea of a more advanced state can be given. In this connection, and in view of the general potentialities of influenza, it is emphasized that time—from four to eight weeks—is required for full recovery.

It may be that the condition described is a precursor of more serious trouble, or, on the other hand, is merely an explanation of a strangely long convalescence. It is well to know of its presence, however.

CIRCUMSCRIBED PROCTITIS OF TRAUMATIC ORIGIN.

BY WILLIAM A. ROLFE, M.D., BOSTON.

[From the Rectal Clinic, Boston Dispensary.]

In the treatment of chronic prostatitis and vesiculitis massage of the prostate gland and seminal vesicles is a useful and necessary adjunct to other measures directed toward the cure of these diseases.

It frequently happens that, because of too vigorous an effort in massaging these organs, and of an insufficient preliminary lubrication of the rectum, injuries to the rectal mucosa take place, giving rise to well defined changes in the mucous membrane overlying the prostate gland and seminal vesicles.

As a result of this injury, characteristic subjective symptoms are produced which are quite constant and uniform. Usually there is a sense of weight and burning in the rectum, painful defecation accompanied by a feeling of incomplete evacuation, and the discharge of white slimy mucus often tinged with blood.

Examination through a rectal speculum shows a circumscribed area of reddened mucous membrane anteriorly and, less commonly, posteriorly as well.

The anterior area varies in size from that of a half dollar to much larger. If a posterior area of inflammation is also present, it is usually smaller than the former. The surfaces of these areas are covered with tenacious mucus, and when the trauma has been severe, patches of erosion may be seen which, when touched by a swab, bleed easily.

When a posterior area of inflamed membrane exists, it is probably due to injury of the mucosa by the back of the knuckle of the finger impinging on the membrane posteriorly.

The prevention of this form of proctitis can be accomplished in large measure by a thorough preliminary lubrication of the rectum by the injection of an ounce or so of some bland oil such as liquid petrolatum.

In giving prostatic massage it should be borne in mind that the rectal mucosa is easily traumatized and that hurried and rough methods are likely to be followed by injury.

The medical treatment of traumatic proctitis requires the discontinuance of massage until such time as the inflammatory process has subsided.

Enemata of normal salt solution given morning and night at a temperature of 110 F. are of value, these to be followed by the introduction of a suppository of

Ext. Hamamelis Grm. 195 (gr. 3)
Zinc Oxide Grm. 325 (gr. 5)
Ol. Theobrom. q.s.

If the membrane is eroded, the topical application of a 3 per cent. solution of Mercurochrome 220 or of a 10 per cent. solution of silver nitrate is indicated.

Constipation must be avoided and the bowel movements kept soft and unirritating by the internal administration of liquid petrolatum 4 c.c. (teaspoonful) four times daily.

Under this treatment, if ulceration has not taken place, which fortunately is rare, the proctitis usually clears up in about two weeks.

330 Dartmouth Street.

THE OCCURRENCE OF TUBERCLE BACILLI IN THE FECES OF TUBERCULOUS PATIENTS.

BY B. M. FRIED, M.D., BOSTON.

Boston Sanatorium, Mattapan.

LITTLE work has been done in this direction, and the results obtained have not always been in agreement. Opinion is widespread not only among medical men in general, but even not infrequently among laboratory men and tuberculosis experts, that the presence of tubercle bacilli in the stools is of rare occurrence and the technic of a stool examination for tubercle bacilli is complex and difficult to perform, and for this reason the examination of a stool is and has been neglected. However, as we will see later, the test is simple and is easy to perform.

From a practical point of view, the occurrence of tubercle bacilli in the stools of tuberculous patients is important in those, particularly in children and old people, who swallow their sputum and for whom, according to the pertinent expression of the French, "their stomach is their cuspidor." It is also important from a sanitary standpoint to know whether tubercle bacilli are excreted in the stools of patients suffering only from a lesion in the lungs, and if such is the case, measures should be taken to disinfect the stools as well as the linen of the patients. As recently suggested by some observers, excretion of tubercle bacilli in the feces may account for the frequent failure of complete cure of open pulmonary tuberculosis, for with the ingestion of expectoration from the lungs, new sources of infection are created in the intestine.

LITERATURE.

Philip and Porter¹ examined one hundred and nine specimens, one hundred of which were from patients suffering with tuberculosis. Thirty-four of these patients had a positive sputum, while the stools were positive in thirty-three. Of one hundred, seventy-five had positive stools. Alexander² examined the feces of eighty-one cases of tuberculous patients, including forty-five with pulmonary tuberculosis, and

found that thirty-eight of the latter had a positive stool, while in the whole series of eighty-one, only fifty-two showed tubercle bacilli in the stools. Rittel-Wilenko³ examined the stools of fifty-four patients, twenty-nine of whom were autopsied and showed intestinal lesions. As a result, the author concludes that the presence of tubercle bacilli in the stools always signifies an intestinal tuberculous lesion. Wilson and Rosenberger⁴ found acid-fast bacilli in the stools positive in all of a hundred positive sputum cases and in twenty-one per cent. in a series of a thousand successive non-tuberculous stools. Klose⁵ examined the stools of seventy-two tuberculous patients, sixty of whom had positive sputums, while fifty-five of these had positive stools. Laird, Kite, and Stewart⁶ in one hundred and one specimens of feces from patients with tubercle bacilli in their sputum, sixty (or 55 per cent.) showed the presence of acid-fast bacilli. Of forty specimens, which did not show them, seventeen were from patients who had no tubercle bacilli in their sputum at the last examination previous to the test or had ceased to have expectoration. If these seventeen specimens are excluded, add the authors, as practically being from patients with negative sputum, the percentage of negative findings in the feces is much higher. The authors obtained in general 72 per cent. of positive stools from patients with positive sputums. Venot and Moreau,⁷ whose technic we have partly adopted, examined the stools of one hundred and fifty patients, tuberculous as well as non-tuberculous. The former always gave a positive test and the latter always a negative one.

TECHNIC.

The principle of the technic is to bring the tubercle bacilli in a pellicle to the top of the centrifuged stool. For this purpose benzoin and ether are used.

Collect a whole morning stool in a sterile basin. Emulsify from 30 to 50 grams of feces with a normal saline solution, adding drop by drop of the latter until the feces is in a semi-fluid state. Filter the emulsion through a piece of sterile gauze, thus removing any debris. The filtered fecal emulsion is poured in two centrifuged tubes and to each 2 c.c. of a mixture of Benzoin-Merck and sulphuric ether *ana partis* is added. The tubes, covered with a piece of sterile rubber, are then well mixed and centrifuged at a high speed for about 15-20 minutes. On the top of the tubes will be seen a thin layer of sediment in which the bacilli will be found. The whole layer is removed, smears are made, dried, fixed in a flame, and stained in the usual manner for tubercle bacilli.

CLINICAL MATERIAL AND RESULTS.*

Employing this method we have examined

*I wish to thank the interns of the Sanatorium, Dr. D. Boyd, Jr., Richard Lebowitz, J. Goldman and H. Stinson, for their kind assistance and cooperation in the clinical part of this work.

one hundred and twenty-six stools of patients at various stages of pulmonary tuberculosis at the Boston Sanatorium, Mattapan.

1st series includes	Sputum pos. 103	Feces pos. 98
2nd series	Sputum neg. 11	Feces pos. 3
3rd series	Sputum neg. 12	Feces neg. 12

The eleven of the second series were all clinically tuberculous. Two of the three positive stools became later positive in the sputum. Twelve of the third series were all clinically non-tuberculous, three being babies from three to six months of age and fed on artificial milk preparations.

TUBERCLE BACILLI AND OTHER ACID-FAST BACTERIA IN THE STOOLS. ANIMAL INOCULATION.

There is a general belief, even among bacteriologists, that the human stools contain non-pathogenic acid-fast bacteria—an idea which comes probably from the fact that acid-fast bacilli are found in certain articles of food, especially in butter (L. Rabinowitch) and in the feces of animals (Moeller). However, this belief has no foundation, and with the exception of Wilson and Rosenberger (*loc. cit.*), no one has been able to demonstrate acid-fast bacilli in non-tuberculous patients. Furthermore, even in definite tuberculosis with positive sputum, the stools are not always positive in 100 per cent. of cases.

However, the most important, available proof of the pathogenesis of acid-fast bacilli in the stools is animal inoculation, and by means of the latter, Alexander and Rittel-Wilenko (*loc. cit.*) proved that the acid-fast bacilli in the stools of tuberculous patients are pathogenic.

The work carried on at the Boston Sanatorium has not been extensive, and we performed our experiments only on a half a dozen of animals.

It is rather understood that a fecal inoculation will produce a fatal septicemia owing to the richness of the stools in bacteria, so that the animal dies long before the development of tuberculosis. To avoid this, we treated the feces in the following manner:

A portion of a positive stool is mixed with a sterile solution of concentrated sulphuric acid diluted one to ten with distilled water. This is well mixed and kept for about ten minutes, then centrifuged and washed (by means of a centrifuge) twice with sterile normal salt solution. Treated in such a way, a small amount of feces was injected into the groin of a guinea pig.

Of six inoculated pigs two were negative, one developed septicemia and died before tuberculosis could be demonstrated. Three in the series developed tuberculosis after a period of four weeks.

THE SOURCE OF TUBERCLE BACILLI IN THE STOOLS.

There are two possibilities for the origin of the tubercle bacilli in the stools: (1) from an

intestinal lesion: (2) from the swallowed sputum rich in tubercle bacilli.

According to Rittel-Wilenko, who verified the results of the stool examination by autopsy in twenty-nine cases, the presence of the tubercle bacilli in the stools is always associated with an intestinal lesion. Other observers, basing their research only on clinical findings, affirm that the absence of symptoms indicates the absence of any pathology in the intestines, and therefore, they believe that the tubercle bacilli in the stools are derived from the swallowed sputum.

As a matter of fact, in advanced cases of tuberculosis—and such were the cases of Rittel-Wilenko—the intestinal tract is practically always involved. On the other hand, the denial of a tuberculous intestinal lesion based only on the absence of symptoms is misleading, for not infrequently at autopsy intestinal tuberculous lesions are found without any symptoms during life.

It is clear that the prime criterion should be the post-mortem, but unfortunately only advanced cases reach the autopsy table. Nevertheless, we would suggest the following differential point as to the origin of the tubercle bacilli in the stools. In those cases in which the intestinal tract is involved, the stool is so loaded with bacilli that we were able to find in each field under the microscope from ten to one hundred and more of bacilli. On the other hand, when the bacilli originate from swallowed sputum the number of bacilli in the feces are few (unless the sputum is rich in tubercle bacilli and the patient swallows all of it) and, curiously enough, correspond to the same number found in the sputum examined on the same day.

En résumé: The stools of tuberculous patients contain practically always virulent tubercle bacilli. This is important, from a diagnostic point of view, in people who swallow their sputum, and especially in old people and children. It is also important, from a sanitary standpoint, to disinfect the feces and the linen of the patients.

249 River Street, Mattapan.

REFERENCES.

1. Philip and Porter: Tubercle Bacilli in the Feces in Tuberculosis. *Medical Journal*, 1910, II, 184.
2. Alexander: An Investigation of the Acid-Fast Bacteria Found in Human Feces, with Special Reference to Their Presence in Cases of Tuberculosis. *Jour. of Hygiene*, 1910, x, 37.
3. Rittel-Wilenko: Die Diagnostische Verwertbarkeit des Tubercular Bacillen Nachweises in der Fazes. *Wiener klinische Wochenschrift*, 1911, xxiv, 327.
4. Wilson and Rosenberger: The Duration of the Actively Infectious Stage of Tuberculosis. *Jour. A. M. A.*, 1909, vii, 449.
5. Klose: Ist der Nachweis von Tuberclebacillen in Stool von Phthisikern für die Diagnose Darmtuberculose Verwertbar. *Münchener medizinische Wochenschrift*, 1910, I, vii, 133.
6. Littel, Kite and Stewart: The Presence of Tubercle Bacilli in the Feces. *Jour. Med. Research*, 1913, xxix, 31.
7. Veiot et Moreau: La présence de bac. tuberc. dans les feces, etc. *Revue de la Tuberculose*, 3, 1922.

THE DOCTOR'S OPPORTUNITIES.*

BY RICHARD E. DICKSON, M.D., HOLYOKE, MASS.

Ladies and Fellow-Members:

Forty-three years ago this Association was formed for the mutual aid of the members, and for several years embraced the family also, more or less, as meetings and lunches were held in the homes. In casting about for a theme for the evening for this, my second address in this capacity in nineteen years, it occurred to me that possibly a following out of our old plan of practical suggestions might be of momentary interest. I've summed up a few elementary facts which have presented themselves from time to time during my twenty-five years of membership here, with the hope that they may be of slight value to our members and, if so, of some interest to the advisory member of each family, the lady of the home, and so my theme, "The Doctor's Opportunities."

Way back, many years ago, a wise old Baltimore medical teacher suggested in his book, which ran through many editions and is not now published, much from his experience and observation to guide other doctors in their life work. No one advice was any more pertinent and helpful than that to choose for one's location a place where he'd really like to live his life, or some good part of it, where he can conform to religious, social and political beliefs, and having selected the desirable place, there to stick through thick and thin; but in the selection to consider his own inclinations and abilities as they might be adapted to the community needs. But as we here are all admirably located, I trust, and sure we are in the right places, this has only a slight interest compared with the more urgent question of how we shall use our abilities in establishing and maintaining ourselves so that the years shall find us a needful part of the place, rather than a back number, of little account. The community introductions and establishments take so many different forms that one has a variety suitable to his inclinations to choose from. In church, or lodge, or club, or social functions, or all together, are opportunities for forming acquaintances and friendships, though my observation has been that those utilizing these means rather than strict professional effort to establish one's self in a larger way, have usually failed, for, after all, the real measure of our value is our ability to relieve suffering and help restore to usefulness, and unless that is the compelling motive, the plan of our endeavor may be too low. As we become a part of the community we usually have many friends but few intimates, no matter how wide the acquaintance may be. It has seemed that possibly we are better off so, as usually intimates

*Address of the retiring president at the annual meeting of the Eastern Hampden Medical Association, Springfield, February 1, 1923.

expect confidences, which more than possibly may be annoying later for, unfortunately, friends are not always loyal and discreet.

We've probably all had more or less of the experience I had out in Granby years ago when one of the town fathers upbraided me for not telling them more about one another's troubles, as I went from home to home, only to have him advise me pointedly not long after that his wife's ailment was a very confidential matter, and he was pleased that I was known to be close-mouthed. However, friendliness and its manifestation of being considerate of others, is a decided asset, used wisely. I recall the varying opinions of two former members of our Association as to how much this should be shown in our contacts with our families. Said one, who was busy and successful, "A doctor who will spend a minute of his time in a social visit, after he has completed his professional observations, is a fool, wasting his time and lessening his grip on the family." Said the other, equally respected and trusted in his community, "Take plenty of time in making your calls, and know as much as possible of the interests of the family, as well as the condition of your patient, and you'll have a much better hold in your community in due time." I leave it to you to choose which is the better method, only saying this—my personal experience has been that the more thoroughly acquainted one is with the interests of each home, the more likely he is to be able to advise wisely in the various details submitted for judgment.

And what a host of opportunities unfold themselves in this, in these days of preventive medicine, when the doctor is more than ever the adviser in preserving health and energy, than in merely treating illness. Just to hastily refer to a very few: The peace of mind we can bring young mothers by helping them to so feed their babies that the periods of inanition or the nights of colics or convulsions are unknown; as the little folks come along to make sure that protection against diphtheria, typhoid and smallpox are secured by proper vaccines, that exposure to any of the diseases for which we have protective vaccines or sera are promptly met; that teeth, tonsils, adenoids, abdominal conditions, the various foci of trouble, are looked after with professional judgment; in short, to convince the family that it is well to consider the doctor a trusted member of the family, as much interested in their progress as those of the immediate name. In matters of education it is so easy to familiarize one's self with the varied facilities available, and help advise, when choice comes in, to get the best for the home. Again, in the problems of adolescence, when the father hesitates through ignorance or diffidence to instruct his sons, or the mother her daughters, and, as they get older

and approach the marriage relationship, plain, courteous advice that will save trouble later, not only is an opportunity, but to my mind a real obligation to our clientele, not to be approached thoughtlessly or carelessly, but with our knowledge and experience, supplemented by careful reading and thought, as to just how to be clean and yet effective, will give our people something they cannot readily buy, even though there are no end of publications on the subjects prepared for lay mothers. Occasionally it happens that we see domestic infelicities, or evidences of one or the other of a home wandering in search of what may be called "liberty," but is more usually license. If faithful to his opportunity as a sort of father confessor of the family, because a most intimate part, the medical man by tact and judgment will often aid in checking the indiscretion, and thus avoiding a break.

For years I've been interested in vocation as it relates to helping young people in shaping their futures, and I've seen over and over again that with this knowledge one can help make other lives of much more value. Some twenty years ago I persuaded a farmer to let his boy go on to Williston after he had finished the local high school, and then followed the boy along with occasional suggestions, for awhile after, as he developed in the paper industry. He is now general manager of one of the largest concerns of its kind in the country, very sure that he owes this directly to my intervention, as otherwise the farm would have absorbed him, and his father's rather shiftless methods been his main instruction during those formative years. Again, I've many times found it of decided advantage to occasionally ask employers I came in contact with professionally as to possible openings, and then to see if some boy or girl I'm interested in can be helped to fill the place. I recall a young draftsman just married, coming in to see me one Friday afternoon in the winter, a few years since, much distressed and perplexed. He had just been told that the concern must reduce expenses, and as he was one of their newer men, he was one to be laid off the very next day. It looked some black, wife on his hands, no income, a comparative stranger in town. I suggested he go back and tell them that if they needed him to finish some work assigned him, and he for some reason wanted to get through right off, they'd require a week's notice at least, and they must do the same by him. Then, with some phoning I was able to get him an appointment with the employment end of another concern, which I discovered needed a draftsman, and the following week found him busy in his new position, where he has since risen to be one of their valuable men.

But while we are considering our opportunities for developing and holding friendships, if not intimacies, we must not forget the personal equation, our own bodies and minds, our physical and mental training,

our recreation. I find that many of us are content with the physical exercise necessary to getting about, or perhaps wrestling with the boiler in winter and mowing a patch of lawn in summer, though even these are denied the apartment dwellers of our number; that most of us make no pretense to devoting any time to strictly physical effort, save possibly an occasional game of golf, and there, I'm sure, *we make a big mistake*. Mental alertness, as well as the opportunity for staving off the various morbid conditions lying in wait, will be furthered by discovering what appeals to us as a diversion, calling for systematic effort in other lines than our professional effort, and developing that. Each needs badly a hobby! What shall it be? For some the gymnasium in winter and the varied opportunities of the country club in summer fill the bill. To others, wandering in the wilds is a recreation, and with good roads radiating in all directions from our center, a drive of not many minutes takes us far from home out into the woods of Eastern Hampden, or Hampshire, or even up into Franklin County. There, hunting and fishing in their seasons, or the perpetual delight of the amateur photographer, getting animate and inanimate life on the films; or the study of plants and flowers in the summer, and mosses and lichens in the winter, swimming and boating at our numerous little recreation lakes, or skating and ice fishing in season, all these add to the joy of life, by taking us from the round of work for a little, and giving us the exercise which keeps us fit. One of my friends has a quickly erected tent in his automobile, together with a little camp outfit. When his day's work is done and nothing urgent in sight, he delights to drive off to some quiet nook miles away, put the tent in working order, and revel in the luxury of campfire cooking and sleeping out of doors.

But most of us, particularly in the earlier years of our practice building, dislike to get too far from the 'phone and thus lose any calls, and for us so situated a most satisfactory result will be secured by the development of a real home in some quiet portion of our town. Have the office in the center; live outside. Present-day telephone arrangements permit this so readily. If one can get an half acre, more or less, in some new tract, the wilder the better, and there develop the house, the lawn, the garden with fruits and shrubs and vegetables and flowers, and watch the whole shape itself nearer and nearer an ideal as the years go by, one has an asset for health and comfort and usefulness to others not to be excelled, for we cannot develop these homes without getting much enthused about them, and so passing our knowledge and experiences on to other home-makers. In fact, one gets so enthusiastic about results that he becomes a determined advocate of urging every family possible out of the apartments into real homes, where they, too, can play in

the dirt and see things grow. But it may be that home and office are as we like. If so, do as I trust we shall hear more of this evening from one of the men who has tried it: buy some wild land near enough to be handy, and spend the open portion of each year changing that over to a productive estate. I've seen too many of my professional brethren, or members of their families, drop out long before they should, because of a lack of the needful physical labor and recreation to keep them fit, and I'd strongly urge on all of our younger members and their homes the advisability of building for the future in the physical effort of hobby riding as referred to earlier, or, to my mind, the better expedient of developing the tract of land and its contents to which we've attached our name. With this latter well started, the needful labor will help us to eat and sleep better, to think more clearly, and will also establish us further in the minds of the community. Said a wise old doctor to a younger, "Your garden is a safe place for folks to see you in, for they won't be accusing you of any scandal so long as they see you working out there, and they'll think you're some good if you can grow things they cannot." Fortunate is the man or woman who has even a slight mechanical tendency, with some love for tools. This can be developed until it becomes a most absorbing pastime, an adjunct to the growing of Nature's products during their seasons, and a comfort to the home, besides, in the production of splints and various devices for helps, a direct aid to professional results. Personally, in our own half acre, where we are always glad to welcome you, developed from a perfect thicket when we bought it, eleven years ago, now with a fertile garden, fruits and fowls, with a good, well-lighted work bench and plenty of tools for the inclement weather, and, so far as possible, a daily, systematic playtime, if for only an hour a day, in one of these lines, is one of my own invaluable opportunities, which I'm trying to commend to all of our Association. With the amount of popular teaching in the daily press and the magazines, and the special books on the subjects, there is a wealth of suggestion, interesting and practical, so that even the novice soon finds success. Applying these gives the real satisfaction of producing from the soil in their seasons the flowers, the fruits and other foods, which are a delight, and, best of all, making physical requirements which promote vigor and usefulness. So find the hobby, and ride it persistently. We'll get much from it, while it will be unlikely to run away with us.

Again, the regular vacation period of the year, one of the good habits of this generation of doctors, is an opportunity never to be missed. But, and here, too, many of us err, I'm positive that a vacation with our friends, in an environment more or less similar to that of the home, is an absolute mistake. The little

cottage on shore or mountain side, with primitive beds, kerosene lamps, and a water supply we have to work to get, with fuel to be converted to proper size to fit the rusty stove, gives us a taste of the wild which is good for us, and I'm in favor of just such an environment, only with the proviso that we who usually do not have much to do with looking after the homely details of food and lodging, there do the work, and let the part of the family usually in charge serve as directing managers only. And, if we can add to this, contact with entirely different types of minds from those we usually meet, whether in books or with people, we will come back to the year's work, stronger in body and mind, better able to absorb more of the ever-increasing flood of advanced teaching, as well as to advise more wisely those who look to us for guidance. While we may have chosen our profession for purely altruistic motives, or scientific interests, more likely the probabilities of a reasonable financial return were factors in the choice, an expectation of an income sufficient for our necessities, a few luxuries, and something to be laid by for the future rainy day.

I'm sure we'll all admit that medicine is not a line yielding wealth, in fact very few professions are, but if we are reasonably successful it gives us comforts and possibilities, and it is up to us how we shall handle our returns. The most common procedure is to spend as we go, figuring that a little later the income will be greater, and then we'll save for old age. Unfortunately, most of us find that as the income increases, our needs keep pace, and the return of the more successful years is as absolutely exhausted as the smaller one was at the start. But, putting off saving for the future is poor policy for us all. I know it is possible by careful watch of expenditures, by using a budget, and there are now so many systems readily available that one can adapt a selection to his needs, and then begin a gradual accumulation, putting it where it will be of value later. Right there comes a big menace to our happiness, for we as a profession are known to the investment venders as a "bunch of easy marks," on whom can be unloaded any amount of gold mine or oil well or industrial *dreams*, with very little tangible behind. One writer suggests that we all need to buy a little worthless gold mine stock just to get the craze out of the system, and I fancy we've all tried it. I confess I have, but let us hope it will work for us as Dr. Squier once remarked to me of a worthless investment he and I were both caught by, "It was one of the most profitable things I ever did, and I'm glad I did it, for it has kept me from making a fool of myself ever since." With the reliable information available as to listed stocks and bonds and mortgages, real producers, far beyond the development stage, and banks ready to aid us in our investments, there is little excuse for putting our savings into the wildcat schemes

besieging us on every hand. I know if we stick to a determination to save a certain portion of every dollar as it comes along, and when an unusual fee presents itself putting it away bodily, the years will show a comfortable accumulation without the narrowing of soul that comes with a miser's habits. Thus I've touched here and there on the personal element in the doctor's opportunities, and would not do justice to the theme if I did not say a bit of his professional possibilities.

Some years ago one of the most practical physicians I've ever known said to me, "It may be all right for men to put in their spare time developing their line in the hospital to which they hold appointment, but I've seen too many of them work like niggers, the hospital getting all the benefit of their reputation, and then later, the men being dropped, while the skill they showed was claimed as an asset of the institution. For my part, what little of reputation or scientific advancement I'm capable of I want to have known by the public as centering right here in my own offices, so that when they go looking for that type of help, it will bring them right here, and not to some impersonal hospital." And that seemed to me to sum up the attitude one might better have towards hospital, industrial, municipal, or other appointments, not to neglect any one of these which we may hold, but to center our effort on being known at our own office as an individual, rather than in any other position as a part of an institution, or a group, or an equipment. Hospital appointments of the ordinary type, calling for our best efforts, but yielding only anxieties and experiences, may add to our prestige, but in the long run are more a part of medical politics in many a community than any real asset. From the altruistic viewpoint, a part of our privilege to the humanity about us, and therefore to be assumed when the call comes, the average appointment is often more of a burden than a benefit in any community where open staff privileges exist. Hospital appointments yielding fees are good so far as they go, but get to be a burden when one is busy. I was for some time in charge of the x-ray work at our city hospital, where the operator receives a part of each fee charged now, I believe, and in my early days got all that was paid. Just as surely as I was particularly busy in my office, with patients waiting, would come a hurry call for some fracture or foreign body case needing immediate attention. As the doctor in charge was waiting and the patient suffering, there was nothing to do but go, and trust to luck and my nurse to have some of the patients there when I got back, so that it was a decided relief when the work passed into other hands.

To many a young man comes the temptation to be affiliated with some of the benevolent orders as physician, which furnish for from \$1 to \$2 per year for

each member unlimited medical care. It serves to increase his income a few hundred dollars each year and gives him just that much more experience in handling disease. But—and here is the main difficulty—he is all too apt to look on lodge calls as of less consequence than his private work, to give most any old thing after the briefest effort at diagnosis, and all too soon develop a careless attitude towards his work, which will hinder him later. I've never happened to know any men who kept at lodge work for any time who were recognized as successes in medicine, while I have been acquainted with a number whose rather careless methods permitted oversights, which made them unpopular with the class of patients we all prefer to have. In my earlier days I was often solicited to take on this type of work, of which we have considerable in Holyoke, and always agreed to do so if they'd do it my way, which was to pay me my regular fee each time they needed me, and pay me nothing otherwise. But I never found a lodge which would do that, and so there was no obligation of the sort for me. Each of us from the start is interested to build up a clientele which will help us to still further work, and thus establish us. While lodge, industrial, municipal or other appointments may be a means to that end, after all, the most satisfactory and effective form of advertising, and thus reaching others, is to be successful with the individual case, to give that case the best that systematic study at the bedside, in the laboratory, and with our books and periodicals, can produce, together with the tact and consideration, more needful even for the sick than for the well.

As a part of our study, brief but thorough case reports are an absolute necessity which one would hardly think to mention save as I've found comparatively few men really making a business of keeping records and filing them. Some hesitate to start this, as the makers of expensive, elaborate systems would have us believe it impossible, except we first buy their outfit for \$200 or so. That, of course, is all foolishness. A package of 3 x 5 or 4 x 6 filing cards, with two brief alphabetical indices, one for office and one for calls, with most any sort of a drawer to file them in, will be a safe beginning, and from that, with subdivisions and additional cabinet sections, one can gradually build up as elaborate a filing system as he may wish. My own records, first in books, but for many years on 4 x 6 filing cards, have been of much value to me, and some help, I trust, to my patients.

Again, one of our possible sources of error is approaching a case with a biased mind. We think the trouble ought to be of such and such a nature, and, to bolster up our opinion, select all symptoms bearing us out, ignoring the others, instead of being guided by an impartial summary of the whole, at the same time mixing it all with a good bit of "horse sense," just ordinary, every-day good judgment. About a

year ago I saw in consultation what seemed to me to be a very plain case of general peritonitis following a ruptured appendix, and found the gentleman in charge trying to reason out that the appendix had not followed text-book methods of developing its attack, and so could be ruled out, while the peritonitis was due to a pneumococcus infection developing from the throat and swept down through the blood current. However, he was agreed to forget the pneumococcus, and immediate operation, with some tedious after-care, gave us recovery, and put both doctor and family on the watch for anything further of that sort, so that when, four weeks later, the patient's wife, and four months later, the sister-in-law, developed similar tendencies, no time was lost in getting rid of the offending parts. It is some task at the start to keep right after systematic reading, particularly of subjects one is seldom seeing, but we neglect a tremendous opportunity if we are careless about this, and, as time goes by it becomes easier and its advantages more evident. Then, as an additional outlet for this reading, if one can be affiliated with a live medical organization such as our Eastern Hampden, where papers, case reports, and discussions stimulate our thought, and should stimulate reading beforehand of the theme under discussion as a preparation for each meeting, we're doing much to make ourselves of real value to others. If each paper or case report is prepared to be submitted for publication after being read, it will get more thought than otherwise, and so be of greater benefit, particularly to the writer. Then, after reading, as I've often urged in our meetings, submit the article for publication. If declined, find out why; if accepted, let that one be an incentive to a better one next time.

Post-graduate work is brought so near to us, and is so nicely adapted to our time opportunities, that one is foolish not to give that attention, as we can. I've been much interested in the various opinions as to just when to take up a specialty. Some teach that if the man elects his line right from the start, declines any work except his particular selection, he will advance more rapidly, and be more of a success than he who goes through the usual plan of doing most everything at the start, and gradually narrowing down by study and experience to the particular line elected. Personally, it has seemed better for one to have the all-around experiences of the general practitioner, and then the development of the line which appeals most. But in all these years of development, one needs, one must have, warm professional friendships, the companionship of other medical men, preferably of wider experience, who will be frank and candid and sympathetic with us, to whom we can turn in our perplexities as well as our triumphs. Most unfortunate is the man so isolated that he does not enjoy this privilege, and I regret to say that I've found more than one

physician right in the midst of many others who has purposely so isolated himself, and looks with suspicion on his brethren, figuring that they will hurt, not help him. Through my years of membership in our Eastern Hampden this has been a most valuable asset to me, and I trust we all of us feel that we are free to turn to one another in just this spirit, and find real companionship. And so, would time and your forbearance permit, I might go on elaborating the infinite number of possibilities before us as individuals, and as members of the noble guild of the healing art. But enough has been said, and I'll stop with a brief quotation from one of the finest tributes to our beloved profession ever written, the words of that grand old Harvard teacher, Oliver Wendell Holmes:—

"How blest is he who knows no meaner strife
Than Art's long battle with the foes of life,
No doubt assails him, doing still his best,
And trusting kindly Nature for the rest.
He comes: the languid sufferer lifts his head
And smiles a welcome from his weary bed;
He speaks: what music like the tones that tell,
'Past is the hour of danger, all is well,'
Hour after hour the busy day has found
The good physician on his lonely round;
Mansion and hovel, low and lofty door,
He knows, his journeys every path explore.
Yes, sharp the trials, stern the daily tasks
That suffering Nature from her servant asks;
His kind office dainty menials scorn,
His path how hard,—at every step a thorn!
What does his saddening, restless slavery buy?
What save a right to live, a chance to die,—
To live companion of disease and pain,
To die by poisoned shafts untimely slain?
Answer from hoary old, majestic shades,—
List while they speak:—

In life's uneven road
Our willing hands have eased our brother's
load;
One forehead smoothed, one pang of torture
less,

One peaceful hour a sufferer's couch to bless,
The smile brought back to fever's parching lips,
The light restored to reason in eclipse,
Life's treasure rescued like a burning brand
Snatched from the dread destroyer's wasteful
hand:

Such were our simple records day by day,
For gains like these we wore our lives away.
In toilsome paths our daily bread we sought,
But bread from Heaven attending angels
brought;

Pain was our teacher, speaking to the heart,
Mother of pity, nurse of pitying art;
Our lesson learned, we reached the peaceful
shore

Where the pale sufferer asks our aid no more,—
These gracious words of welcome, our reward—
'Ye served your brothers, ye have served your
Lord.'"

Book Reviews.

Sex and Dreams. By DR. WILLIAM STEKEL of Vienna. Translated by James S. VanTesslaar, M.D. Boston: Richard Badger.

The author in this book attempts to make dream interpretation so plain and understandable that the general practitioner and others interested in psychoanalysis can understand and make use of this aid to diagnose nervous disorders. He shows how the analysis is done in actual practice and gives numerous typical dreams and analyzes them. Dream analysis is a comparatively new science which requires much care and patience to be successful but the rewards are well worth the trouble. The author states that every mental activity is dominated by the law of bipolarity. To every instinct there is a counter instinct, to every virtue a vice. To every manifestation of strength some weakness.

What Is Social Case Work? By MARY E. RICHMOND. Russell Sage Foundation, New York, 1922. Pp. 268. Price, \$1.

In this little volume, the author of "Social Diagnosis" presents in a scholarly way her social philosophy and her conception of social case work as the maintenance and development of personality. Of special interest to physicians and medical social workers will be her illustration of emancipation of Helen Keller by Miss Sullivan and Dr. Howe, which she recognizes as a beautiful piece of social case work. Miss Richmond develops her thesis through a series of case illustrations of families broken by disaster and individuals crippled by misfortune as the social case worker skillfully carries them through the processes of social treatment.

The application of social case work to the school, the court and the hospital is briefly given and the interrelation of social case work with social reform and social research is convincingly presented. She maintains that the true social case worker, whom she recognizes as of increasing professional significance, is prompted by the desire to share our common life and the conviction of its infinite worth in the building of our democracy.

Obstetrics for Nurses. By JOSEPH B. DE LEE, A.M., M.D. W. B. Saunders Company.

The sixth edition of Dr. De Lee's "Obstetrics for Nurses" shows what a valuable book it has proved itself to be. It is for the young medical practitioner of much more value than it is to the average obstetric nurse. Much of the material presented goes well over her head, yet for the institutional nurse with a teaching position it will continue to hold a foremost place.

Current Literature Department.

ABSTRACTORS.

GILBERTO M. BALDINI	CHESTER M. JONES
W.M. B. BREED	CHARLES D. LAWRENCE
LAURENCE D. CHAPIN	HERMAN A. OSGOOD
AUSTIN W. CHEEVER	FRANCIS W. PALFREY
RANDALL CLIFFORD	EDWARD H. RISLEY
ISADOR COBITAT	GEORGE C. SHATTUCK
ERNEST M. DALAND	WILLIAM M. SHEDDEN
HORACE GRAY	WARREN R. SISSON
ROBERT M. GREEN	GEORGE G. SMITH
JOHN B. HAWES, 2d.	JOHN B. SMITH, JR.
JOHN S. HODGSON	WILDER TILSTON
FRED S. HOPKINS	BRYAND D. WETHERELL

ALTERATIONS IN THE CURRENTS AND ABSORPTION OF CEREBROSPINAL FLUID FOLLOWING SALT ADMINISTRATION.

FOLEY (*Archives of Surgery*, March, 1923) writes as follows:

Salt administration establishes a new ratio between cerebrospinal fluid production and absorption pressures, resulting in decreased tension of the fluid in the subarachnoid space and ventricles of the brain.

Salt administration induces these changes in the mechanism of fluid absorption: (a) intraventricular absorption through the choroid plexus and ependyma; (b) absorption by the capillaries of the brain substance with reversal of fluid flow in the perivascular spaces; (c) an increased rate of absorption along the sheaths of the cranial and spinal nerves; and (d) direct absorption into the vessels traversing the subarachnoid space.

The administration of salt causes alterations in the gross currents of the fluid which are incident to the changes in the mechanism of cerebrospinal fluid absorption described above. Chief among these alterations in the currents of the fluid is reversal of flow in the aqueduct and ventricular system.

[E. H. R.]

PATHOLOGIC PTOSIS OF THE RIGHT COLON.

QUINN (*Archives of Surgery*, March, 1923) writes as follows:

Colopptosis is a very common anatomic abnormality. Comparatively few of those who have a ptotic colon suffer serious symptoms as a consequence, but the incidence is, nevertheless, much greater than we formerly supposed. Some of the effects of colopptosis are translated to other abdominal organs which may then give rise to a new set of symptoms, thus obscuring the original and chief cause of the trouble. Medical treatment gives relief in most cases and should be given a thorough trial in all cases, but its ability to cure is doubtful in any case. Surgical treatment is as successful in these lesions as in many other so-called surgical diseases and promises better results as experience accumulates. Chronic appendicitis is an infrequent disease, and the term should be restricted to those comparatively few instances in which there actually is a chronic lesion of the appendix.

[E. H. R.]

THE NATURE OF CRANIAL HYPEROSTOSIS OVERLYING ENDOTHELIOMA OF THE MENINGES.

PHEMISTER (*Archives of Surgery*, March, 1923) writes as follows:

The hyperostosis which develops over a considerable proportion of meningeal endotheliomas results from penetration of the dura and direct invasion of

the skull by the tumor. The tumor permeates the skull, rarefies slightly the inner and outer tables and stimulates new bone formation, usually from both the internal and external surfaces. Tumor cells are found in varying numbers throughout the cancellous spaces of the hyperostosis. The new bone is not tumorous in nature, and is merely ossified stroma of the invading endothelioma. Its spongy or radiating arrangement is similar to that which is seen in the ossification occurring in other types of tumor, whether primary or secondary in bone and whether the new bone itself is of tumorous or non-tumorous nature.

[E. H. R.]

THE ETIOLOGY OF URINARY LITHIASIS AN EXPERIMENTAL STUDY.

KEYSER (*Archives of Surgery*, March, 1923) writes as follows:

The biochemist and physicochemist must lead in the study of the complexities of action of urinary solvents and the states of materials held in solution. As yet, knowledge of the urinary colloids and pigments is very slight, in a true physicochemical sense. In trying to deal with problems of this kind one immediately finds the borderline of scientific knowledge.

On the clinical side, an endeavor must be made to learn what type of bacteria is associated with the process, and whether or not there are specific strains for each chemical in the calculus-forming group. It must be decided why one patient has an oxalate and another a urate or phosphate calculus; why one has a single small stone for years, while another passes many of such size, and why still another presents himself with both kidneys filled with branching stones and without a history of ever having passed sand.

These are the broader aspects of the problem of urinary lithiasis. It is fair to assume, however, that a proper coöperation of biochemists, bacteriologists, and urologists will clear up these points ultimately and bring the problem to a satisfactory solution.

[E. H. R.]

STUDIES IN EXHAUSTION: IV. PHYSICAL TRAUMA.

CRILE (*Archives of Surgery*, March, 1923) makes a general summary of the study of this phase of his subject as follows:

1. The effects of physical injury, especially of abdominal trauma, have been studied by (a) observations of the blood pressure; (b) measurements of the constituents of the blood; (c) histologic studies; (d) measurements of the H-ion concentration and of the alkali reserve of the blood; (e) estimations of the iodine content of the thyroid gland; of the epinephrin content of the suprarenals and the epinephrin activity; of the pituitrin activity; of the glycogen content of the liver and of voluntary muscle; (f) measurement of the electrical conductivity of the brain and the liver; (g) direct measurements of the temperature of the brain and the liver; and (h) clinical observations of patients after physical trauma received by accident or in war, or in surgical operations.

2. All of these lines of investigation indicate that changes in the central nervous system—primarily in the brain—constitute the fundamental cause of the exhaustion and shock which follow physical trauma.

3. The experimental evidence indicates that the liver, and possibly the suprarenals, is linked with the brain in the cycle of exhaustion-producing changes which are initiated by the changes in the brain.

4. These studies present no evidence that any primary change in the distribution or constitution of the blood is produced by physical trauma alone.

When such changes were demonstrated, they were end-effects, not causative factors, of shock or exhaustion.

5. A limited group of experiments indicate that, under anesthesia at least, the suprarenals do not respond to the stimuli of physical trauma by any increase in their output.

6. The essential cause of exhaustion from physical trauma is identical with that of exhaustion from insomnia, by emotion and by exertion, as presented in the preceding studies in this series.

[E. H. R.]

PRIMARY OSTEOMYELITIS OF THE PATELLA.

CHESKY (*Surgery, Gynecology & Obstetrics*, March, 1923) writes as follows:

Patellar osteitis of haematogenous origin is rare compared to osteomyelitis elsewhere. It has never been seen before the age of 5 and is the most frequent between 5 and 15. Ossification of the patella starts at the age of 4 to 5 and is completed by 16. The blood supply is practically nil before 5, richest from 5 to 15 and diminishes after that age. There is a frequent history of slight trauma preceding the onset of patellar osteomyelitis. Abscesses practically always point anteriorly and the knee-joint is involved only in late, neglected cases. The prognosis as to function is good if operated on before the knee-joint is involved. The patella is frequently reproduced in children even after complete removal, if the periosteum is preserved.

[E. H. R.]

THE FRACTIONAL TEST MEAL IN GASTRO-INTESTINAL DISEASES.

HUNTER (*Quarterly Journal of Medicine*, January, 1923) reports the results in an extensive series of cases, all verified by operation or autopsy. Total acidity and free HCl were measured in the usual way, and the emptying time was taken as the time at which starch was no longer demonstrable in the contents.

The findings in peptic ulcer are especially interesting. The cases of duodenal ulcer are divided into two groups: (1) those without, and (2) those with obstruction. In the first group the findings were remarkably constant. The fasting contents were easily obtained clear, with an average HCl of 26 and total acidity of 43. The curve rose rapidly, reaching a maximum at the one-hour period, with free HCl 68 and total acidity 78. From then on the curve was a plateau, with little fall during the three-hour period of observation. The values for free HCl and total acidity remained close together throughout. The specimens were all clean and nearly devoid of mucus, and often of a watery appearance. The emptying time was rapid, in agreement with the findings of the x-ray examinations.

These findings are of considerable diagnostic importance, and compare favorably with the x-ray results, which were inconclusive in no less than one-third of the nine cases studied.

The six cases with obstruction all gave a long history, of about twenty years' duration. The fasting contents were not clear, as in the preceding group, but turbid with a dirty brown mucoid sediment; the acidity was also higher (35 and 50). The curve was of the "climbing" type, with a gradual ascent to a maximum at two hours, with free HCl of 50 and T. A. of 69. It should be noted that the figures for the Ewald meal at one hour were much lower than this maximum, viz., 25 and 59. The emptying time was delayed, starch being still present at the end of three hours.

One case was exceptional in that a marked hypoa-

city was present, probably as the result of a severe hemorrhage.

The unobstructed cases of pyloric ulcer showed usually a climbing type of curve with the maximum at the two-hour period with free HCl 48 and T. A. 64. The figures for the Ewald breakfast at one hour were 41 per cent. lower. One case showed the curve of uncomplicated duodenal ulcer, and one with great weakness as the result of starvation showed a low climbing type.

Pyloric ulcers with obstruction showed no change from the foregoing unless the obstruction was very marked, in which case the difference between the values for free HCl and total acidity was strikingly increased. Starch was found at the end of three hours in this group, but also in the case of pyloric ulcer without obstruction. Both groups showed a marked fall in the curve towards the end, thus differing from duodenal ulcer.

In ulcer of the body of the stomach the findings were more variable, which may be accounted for in part by the presence or absence of pylorospasm. In general they resembled those of pyloric ulcer, but in four of the twenty cases there was nearly complete achlorhydria, differing however from that of pernicious anemia and cirrhosis of the liver in that the fluid was copious.

The effects of operation were studied, and were found to be the same, whether or not the pylorus was occluded by the surgeon. The motility was increased in 70 per cent. Regurgitation of bile was more frequent and more marked than before operation. The effect on the acidity was variable. In about one half complete achlorhydria was noted, in the others the maximum values for HCl were about the same as before, it being the exception to find a considerable reduction rather than absence of HCl. No connection was apparent between the values found and recurrence of the ulcer.

Cancer of the stomach showed achlorhydria in only 10 of 15 cases. In those with absence of free HCl the emptying time was rapid, unless obstruction was present; the specimens were dirty, difficult to obtain, and showed mucus and often macroscopic blood. Of the remaining five cases, three showed hyperacidity and two normal figures; several of these cases were instances of carcinoma arising in peptic ulcers.

Eight cases of obstruction of the common bile duct showed high figures for acidity, often with a curve resembling that of duodenal ulcer, except that the emptying time was delayed. He explains this as due to the extension of the alkaline bile (and sometimes of pancreatic juice) from the duodenum.

Cirrhosis of the liver showed achlorhydria in most cases, with scanty contents containing a dirty mucus. Pernicious anemia gave similar findings. It is interesting to note that secondary anemia occasionally gave rise to absence of HCl, which might persist after the blood count returned to normal.

[W. T.]

CARBON TETRACHLORIDE AS AN ANTHELMINTIC.

HALL (*Am. Jour. of Trop. Med.*, Sept., 1922) points out facts of importance to those who may wish to employ carbon tetrachloride. He says that the safety factor of the drug can be increased by preliminary administration of morphine; that inhalation of the fumes by animals that have bitten the capsules in which the drug was administered has resulted in immediate collapse with cessation of respiration; that many such animals have been relieved by artificial respiration, and that, the gas being heavy, it is advisable to place the head and chest low to help in clearing the lungs. Administration in hard gelatin capsules is recommended.

The importance of using a pure product is emphasized. Among impurities reported are carbon bisulphide and carbonyl chloride (phosgene). The safety factor of the drug for dogs is very high and monkeys are very tolerant, even to large and repeated doses.

Purgatives may not be needed.

The combination of carbon tetrachloride and chenopodium has proved very efficacious for hookworm and for ascariids but chenopodium is constipating and may require a purgative.

A combination of carbon tetrachloride and thymol is also very effective against hookworm, and appears to act on tapeworms as well, although carbon tetrachloride alone is not useful for tapeworm.

Information is needed about the amount of absorption and mode of elimination of carbon tetrachloride.

[G. C. S.]

GEOGRAPHICAL DISTRIBUTION OF HOOKWORM INFECTION IN THE UNITED STATES, DETECTED IN ARMY RECRUITS.

KOFOID (*Am. Jour. of Trop. Med.*, Sept., 1922) presents data that are interesting and important, but owing to the selective application of the draft they do not serve to show the percentage of infection in the population of the country as a whole. Moreover, examinations were made only of men coming from parts of the country known to be more or less heavily infected with the disease, and the obviously sick had been excluded by the preliminary examination. Of 19,640 men examined, however, 15.5 per cent. showed evidence of infection. On the ground of economy and efficiency in education a plea is made for examination of children in the public schools, and it is pointed out that by thorough-going and repeated inspection and eradication of the infection by treatment of infected persons and by proper sanitation it is ideally possible in this country to bring hookworm within the group of relatively rare diseases.

[G. C. S.]

The Massachusetts Medical Society.

MEMBERSHIP CHANGES FROM MARCH 1, 1923, TO MAY 1, 1923.

(The Annual Directory of Fellows was published as of January 1, 1923.)

OFFICIAL LIST.

Compiled by the Secretary.

ALPHABETICAL LIST.

Goodale, George Lincoln, Honorary member, died at Cambridge, April 12, 1923, aged 83.
Allen, Carmi Rupert, Boston, now 238 Newbury St.
Allen, Gardner Weld, Boston, now 146 Massachusetts Ave.
Barnard, Frederick Joseph, Greenfield, now 78 Federal St.
Bassow, George Joseph, Athol, now 286 Main St.
Benoit, Samuel Joseph, Gardner, now 18 Parker St.
Berlin, Maurice George, from Dorchester to Brookline, office Boston, 68 Bay State Road.
Bliss, Jesse Leonti, Holyoke, now 328 High St.
Bliss, William Everett, from Medford to Nevada, Iowa, Iowa Sanatorium.
Brennan, John P., North Adams, now 112 Main St.
Brown, William James, from Boston to Allston, 1315 Commonwealth Ave.
Burnham, Elmond Arthur, from Boston to Wellesley, office Boston, 114 Huntington Ave.
Burns, John Edward, Boston, now 344 Commonwealth Ave.

Burns, Robert Francis, Fitchburg, now Moran Bldg.
Cauffill, Robert Emmet, Springfield, now 169 Princeton St.
Carden, Charles James, from Haverhill to Tewksbury, State Infirmary.
Caswell, Bertram H., from Medford to West Somerville, 86 Powderhouse Blvd.
Choate, Alton Jay, from Ithaca, N. Y., to Johnson City, Tenn., Nat'l Sanatorium.
Clark, Frederick Timothy, Westfield, now Parks Bldg.
Clark, George Henry, Holyoke, now 164 Cabot St.
Clarke, Louis Henry, Holyoke, now 282½ Maple St.
Clarke, Philip Henry, Holyoke, now 282½ Maple St.
Clement, George Wilmet, from Roxbury to Nashua, N. H., R. F. D. No. 3.
Conroy, Edward C., Andover, office Lawrence, now 29 Essex St.
Compal, James F., Washington, D. C., now Army Medical Museum.
Crosby, Walter H., Brighton (Boston), 304 Faneuil St.
Crothers, Bronson, from Boston to Cambridge, office Boston, 311 Beacon St.
Daniels, Louis R., Watertown, now 98 Nichols Ave.
Deitch, John, from Roxbury to Manchester, N. H., 967 Elm St.
Dickson, Richard E., Holyoke, now Phoenix Bldg.
Doherty, Gerald L., from Boston to West Roxbury, office Boston, 512 Commonwealth Ave.
Downing, John G., Boston, 784 Beacon St.
Easter, Edna F., West Medford, 70 Harvard Ave. (not Howard St.)
Edwards, Martin R., Wayland, office Boston, 21 Bay State Road.
Fawcett, Deborah, Newton, 430 Center St. (not Cedar St.)
Faxon, Eudora W., from Arlington Heights to Indiana University, Bloomington, Ind.
Fay, Frank Gleason, from Worcester to Brattleboro, Vt., Lawton Hall.
Felch, George Alfred, from Boston to Cambridge, office Boston, 1009 Boylston St.
Ferguson, Edward Hugh, Dorchester, now 29 Hancock St.
1904 } Fountain, Oliver Reynolds, Lynn, 502 Essex
1923 } St. Restored by Council as of February 7, 1923.
Frank, John Raymond, from Roxbury to New York City, 149 East 67th St.
Fremont-Smith, Frank, Jr., from Boston to Cambridge, 25 Reservoir St.
Fulstow, Marjorie, from Boston to Cooperstown, N. Y., Mary Imogene Bassett Hospital.
Gallagher, Thomas M., Newton, now 31 Channing St.
Gallupe, Harold Q., Watertown, office now Boston, 479 Beacon St.
Gay, William Madison, from Washington, D. C., to Oteen, N. C.
Généreux, Edmond Alfred, from Millville to Leominster, 270 Mechanic St.
Gilman, William H., Cambridge, now 325 Western Ave.
Goethals, Thomas R., Brookline, office Boston, 413 Beacon St.
Goss, Arthur Vincent, Williamstown, 17 Buckley St. (not Bulkeley.)
Hanley, Francis Joseph, Whitman, now 29 Park Ave.
Hardwick, Everett V., from Dorchester to Dedham, 168 Mt. Vernon St.
Hart, Francis D., Worcester, now 51 Midland St.
Healy, William, from West Natick to Boston, 40 Court St.
Higginbotham, Fred A., Watertown, now 112 Mt. Auburn St.
Hirsch, Henry L., Boston, now 496 Commonwealth Ave.
Holmes, Cofin M., Springfield, now 310 Main St.

- Horrigan, Arthur J., Springfield, now 462 Belmont Ave.
- Howard, Herbert Barr, died at Lynchburg, Va., March 6, 1923, aged 67.
- Howard, Herbert Handy, from Somerville to Boston, 24 Marlborough St.
- Hutton, Willis A., Swampscott, now 81 Walker Road.
- Irvine, Harry W., Boston, now 1069 Boylston St.
- Jordan, Michael M., Worcester, now 21 High St.
- Kassies, Siad H. A., now Ramallah, Jerusalem, Palestine.
- Kittredge, Thomas, died at Salem, March 11, 1923, aged 70.
- Knowlton, Edward A., Holyoke, now 327 Appleton St.
- Leary, Alfred James, from Newton to Lawrence, office Boston, 19 Bay State Rd.
- Leland, Forrest LeRoy, South Hadley Falls (Hampshire) to Hampden, Feb. 4, 1914.
- Lofrus, John T., Worcester, now 311 Main St.
- Lynch, Frederick James, from Boston to Cambridge, office Boston, 353 Commonwealth Ave.
- Mackerron, Horace G., from Worcester to Charles town, P. O. Box 100.
- Mann, David Edwin, from Johnson City, Tenn., to Norfolk, Mass.
- Mather, John A., Greenfield, now 31 Federal St.
- McGinn, Charles D., Brockton, now 12 Cottage St.
- McIntire, Elsie, now Hillside, N. J., 1435 Maple Ave.
- McDonald, William Joseph, of Brookline, deprived of the privileges of fellowship by the Council, October 1, 1922. Delecte.
- McDonald, William James, Boston, now 9 Massachusetts Ave.
- McGannon, Thomas G., Lowell, now P. O. Box 1077.
- McGillicuddy, Richard A., Turner's Falls, now 122 Avenue A.
- Meehan, Patrick Joseph, Lowell, now 48 Highland St.
- Meserve, Edwin A., from Allston to Newton Center, office Boston, 45 Bay State Rd.
- Moore, Frederick P., from Middleboro to East Norfolk, U. S. Vocational School.
- Moore, Mary T. V., Brighton (Boston), now 1963 Commonwealth Ave.
- Mulhern, Joseph P., Worcester, now 22 Portland St.
- Murray, Benjamin F., Boston, now 500 Boylston St.
- Murray, Patrick J., Dorchester, now 147 Harvard St.
- Nutter, Denton G., from Waban to Newton Center, 1091 Center St.
- O'Connor, Joseph William, Worcester, now 17 Elm St.
- O'Hare, James P., Jamaica Plain, office Boston, now 270 Commonwealth Ave.
- Page, Albert Kidder, died at Arlington Heights, April 3, 1923, aged 59.
- Park, Francis Edwin, Stoneham, office now Boston, 462 Boylston St.
- Parker, George L., from Clinton to Springfield, 820 State St.
- Parker, Wallace Asahel, from Lisbon, N. H., to Dorchester, 1773 Dorchester Ave.
- Parkins, Leroy E., from Roxbury to Brookline, office Boston, 21 Bay State Rd.
- Parsons, Azariah W., from Mexico City to Mazatlan-Shindon, Mexico.
- Paul, Socrates J., Springfield, now 172 Chestnut St.
- Paul, Walter E., Boston, now 224 Commonwealth Ave.
- Perry, Arthur Pedro, died at Jamaica Plain, April 1, 1923, aged 64.
- Phipps, Cadis, Boston, now 587 Beacon St.
- Polak, Isaac B., from Springfield to Medical Department U. S. Navy, U. S. S. Cleveland.
- Powers, William J., Holyoke, now Holyoke Nat'l Bank Bldg.
- Reeves, Marcellus, from Brookline to Cambridge, office Boston, 1069 Boylston St.
- Regan, James J., from Dorchester to South Boston, 940 Broadway.
- Rice, Albert Raymond, died at Springfield, April 30, 1923, aged 82.
- Rice, Harry E., Springfield, now 6 Maple St.
- Rice, Kenneth Harrison, from Worcester to Groton, Groton Contract Hospital.
- Robbins, Edmund Henry, Somerville, now 334 Broadway.
- Rogers, Orville Forrest, died at Dorchester, March 25, 1923, aged 78.
- Salmon, Charles A., Worcester, now 311 Main St.
- Sargent, Oscar Franklin Libbey, from Lawrence to Farmington, N. H. (not Maine), P. O. Box 436.
- Schubmehl, Frank Edward, from Lynn to East Lynn, 37 Bassett St.
- Shattuck, George Bruce, died at Boston, March 12, 1923, aged 78.
- Sherburne, Andrew E., from Portsmouth, N. H., to Dorchester, 1773 Dorchester Ave.
- Shukle, R. M., Boston, now 520 Beacon St.
- Shulman, David Hermann, Dorchester, 106 1923 Glenway St. Restored by the Council, as of February 7, 1923.
- Sisco, Dwight L., from New York City to Roxbury, 170 Pilgrim Road.
- Silberg, Morris A., Roxbury, now 472 Warren St.
- Simpson, Charles, Southbridge, now 54 Hamilton St.
- Smith, Curtis Everett, from Boston to San Francisco, Cal., University Hospital, University of California.
- Smith, Richard Hsley, from Boston to Medford Hillside, 16 Stoughton St.
- Sporn, Abram, Springfield, now 136 Main St.
- Stickney, Clifford Webster, died at Holden, April 9, 1923, aged 67.
- Story, Theodore L., from Brighton to Hartford, Conn., 216 Farmington Ave.
- Teh Tso, Ernest, from Roxbury to Peking, China, Peking Union Med. Coll.
- Tiagh, Frederick, died at Newburyport, March 2, 1923, aged 60.
- Tober, Jacob B., Springfield, now 228 Main St.
- Vose, Samuel N., Needham, office Boston, now 15 Bay State Road.
- Vrooman, Earle M., North Adams, now 320 New Kimbell Bldg.
- Weiner, Sidney H., Boston, now 536 Commonwealth Ave.
- White, John Robert, Oakland, Cal., now 1445 Oak St.
- Wight, Freeman C., Boston, now 32 Hayward Pl.
- Williamson, Cordelia Isabella, London, Eng., care of Thomas Cook & Sons, Ludgate Circus, E. C. 4.
- Witte, Max E., from Roxbury to Clarinda, Iowa, State Hospital.
- Woo, Shuntai T., from Boston to New York City, Presbyterian Hospital.
- Wood, Russell, New Bedford, now 331 Union St.
- Wright, Charles W., North Adams, now Dowlin Block.

RESULTS OF THE RECENT EXAMINATION OF APPLICANTS FOR MEDICAL EXAMINATION.

The Board of Registration in Medicine examined 48 applicants for registration in March. Twenty-eight were successful and 20 were rejected. This abnormally large number of rejections is an impressive demonstration of the state policy that encourages the continued existence of the low grade medical schools.

THE BOSTON Medical and Surgical Journal

Established in 1828

Published by The Massachusetts Medical Society under the jurisdiction of the following-named committee:

For three years WILLIAM H. ROBERT, JR., M.D.

ROBERT I. LEE, M.D.

ROBERT B. OSGOOD, M.D.

For two years JAMES S. STONE, M.D.

HORACE D. ARNOLD, M.D.

CHANNING CROTHINGHAM, M.D.

For one year HOMER GAGE, M.D., Chairman.

EDWARD C. STREETER, M.D.

EDWARD W. TAYLOR, M.D.

EDITORIAL STAFF.

DAVID L. EDRALL, M.D.

WALTER B. CANNON, M.D.

REID HUNT, M.D.

ROBERT W. LOVETT, M.D.

FRANCIS W. PRABODY, M.D.

JOHN P. SUTHERLAND, M.D.

S. BENJ. VOLLMER, M.D.

GEORGE R. MINOT, M.D.

FRANK H. LAHEY, M.D.

WALTER P. BOWERS, M.D., Managing Editor.

ASSOCIATE EDITORS.

GEORGE G. SMITH, M.D.

WILLIAM B. BREDT, M.D.

JOSEPH GARLAND, M.D.

SUBSCRIPTION TERMS: \$6.00 per year in advance, postage paid for the United States, \$7.50 per year for all foreign countries belonging to the Postal Union.

Material for early publication should be received not later than noon on Saturday. Orders for reprints must be sent to the printer with galley proof of paper. Upon written request, authors will be furnished free one hundred eight-page reprints, without covers, or the equivalent in pages in articles of greater length.

The Journal does not hold itself responsible for statements made by any contributor.

Communications should be addressed to The Boston Medical and Surgical Journal, 126 Massachusetts Ave., Boston, Mass.

THE IMPORTANCE OF THE EARLY RECOGNITION OF TUBERCULOSIS IN INFANCY.

THAT the successful treatment of tuberculosis is dependent on its early recognition is too well known to require discussion. This is true of tuberculosis at all ages, but applies especially to the disease in early life, owing to its peculiar nature at this time.

Tuberculosis in early life may be divided into primary, secondary, and tertiary stages (Pirquet). The primary stage is usually of little or no significance from a clinical standpoint. Tubercle bacilli are inhaled and cause a very small pulmonary lesion which rarely spreads and as a rule heals promptly. This is the primary stage and corresponds to the initial lesion of Ghon. From it, however, tubercle bacilli reach the mediastinal lymph nodes and cause definite tuberculous lesions. This glandular stage is the so-called secondary stage of the disease. In the type of tuberculosis due to the ingestion of tubercle bacilli, a similar process probably occurs. It is not known definitely whether a lesion of the intestinal mucosa is thus produced which would be comparable to the initial pulmonary

lesion of Ghon, or whether the bacteria pass through the intact intestinal mucosa. At any rate a secondary lesion of the mesenteric lymph nodes occurs. In infants and young children the fate of the individual is dependent entirely upon the protective mechanism of the glands. If the infection is sufficiently virulent and the resistance of the individual sufficiently low tubercle bacilli gain entrance to the blood stream and produce a so-called tertiary lesion. In the vast number of instances this tertiary lesion is generalized miliary tuberculosis which is always fatal. In rarer more fortunate instances the tertiary lesion occurs in bones and joints, causing obvious lesions which are readily recognized and are amenable to treatment. The younger the individual the less likely are these lesions to occur, and the more likely it is that the tertiary lesion will be a generalized and fatal infection.

It, therefore, seems obvious that if we are to reduce the mortality from tuberculosis in infancy we must recognize the disease while it is still confined to the glands. This oftentimes is a matter of considerable difficulty. An infant may harbor a tuberculous infection in the mediastinal glands and show no striking or characteristic symptoms. None may be evident until a generalized tuberculosis occurs. Bearing in mind, however, the possibility of such infection the disease can be recognized early. Tuberculous infection in early life, during the secondary stage, is oftentimes accompanied by a slight daily rise in temperature. If the mediastinal glands are large a cough may be present. In older children who are able to cooperate D'Espine's sign may occur. There is usually a history of failure to gain in weight, and the general appearance of the patient may indicate the presence of some type of infection. Symptoms as obscure as these may be due to many causes but should always suggest the possibility of tuberculosis. There are two means of diagnosis which are of most importance: first the tuberculin test and second the x-ray. If it became a common practice to do a tuberculin test on all infants who show symptoms in any way suspicious of a tuberculous infection and not adequately explained, the recognition of glandular tuberculosis would be much aided. In most cases a cutaneous test is sufficient, but if this is negative an intracutaneous test with from 1/10 to 1 mgm. of tuberculin should be done, as oftentimes the cutaneous test is negative and an intracutaneous test may be positive. In a young individual a positive tuberculin test is indication for active anti-tuberculosis treatment, regardless of the presence or absence of a demonstrable tuberculous lesion. Even though a positive tuberculin reaction may be due to an entirely latent or healing lesion, yet we have no means of determining this definitely, and each case should be treated as though

it were active. An x-ray examination of the chest may show the degree of involvement of the mediastinal glands. The recognition of tuberculosis of the mesenteric lymph nodes is more difficult, as here the x-ray is of little use. At times there may be abdominal symptoms such as pain and perhaps a lessened absorption of fat. If the glands are large they may be palpable, especially in an individual with a flaccid abdominal wall or by aid of anaesthesia.

Some years ago the belief was current that all infants under a year who were affected with tuberculosis died of a general miliary infection. It was considered that a positive tuberculin test was sufficient to indicate a bad prognosis. We know now that this is not true; that if tuberculosis in infancy and early childhood is recognized at the time when it is still confined to the lymph nodes a cure can be readily effected. In the face of this evidence and the fact that children are so prone to develop general miliary tuberculosis, which is uniformly fatal, the prompt recognition of the secondary stage is of the greatest importance.

In considering the importance of the early recognition of tuberculosis we have made no mention of rarer types of foci in which the diagnosis offers little difficulty. Tuberculosis of the tonsils and skin furnish not infrequent examples. Since this editorial is concerned primarily with the recognition of the disease nothing has been said about the prevention of infection. To effect this much has been done to teach the public to appreciate that the tuberculous patient is a menace to those with whom he comes into contact unless special precautions are taken. In a similar way recognition has been taken of the dangers of milk from tuberculous cows. Despite the vast influence of educational measures such as these, the day is probably distant when it will be possible to prevent the infection of the young. Meanwhile by the recognition of tuberculosis in the young while the disease is still in the secondary stage it is possible for us to reduce materially the high mortality from this disease.

MILK-BORNE EPIDEMICS

THE *Nation's Health* for April contains an article of unusual interest on the protection afforded by pasteurization against milk-borne epidemics. Several factors are to be considered in judging milk, according to Thomas G. Hull, Chief of the Division of Laboratories of the Illinois Department of Health, the author of this paper. First is the butter fat content—an economic problem. Second is the sweetness of the milk when delivered to the consumer, a very essential factor in feeding infants who may be overwhelmed by massive doses of even

non-pathogenic organisms. Third is the cleanliness of the milk, in part, at least, an esthetic factor, and fourth and most important is the safeness of the milk.

The Illinois Department of Public Health possesses records of more than four hundred epidemics with thousands of cases of typhoid fever traced directly to contaminated milk. Records are also filed in the department of hundreds of epidemics of other diseases,—diphtheria, scarlet fever, and streptococcus sore throat,—which have been traced to similar sources. In Chicago, for instance, in 1912, an epidemic of streptococcus sore throat occurred, estimated at 10,000 cases. Pasteurization of milk was not at that time compulsory, but where the milk was effectively pasteurized cases did not occur.

Nathan Straus began the distribution of pasteurized milk in New York City in 1892, at which time the summer death rate of infants was 136.4 per thousand. Fifteen years later this had been decreased to 62.7 per thousand. Numerous other figures bear witness to the superiority in point of safety from infection of pasteurized over ordinary raw market milk.

Milk may be infected with tubercle bacilli in two ways. If a cow has a tuberculous udder massive direct infection of the milk is sure to occur. In cows with pulmonary tuberculosis the sputum is swallowed and the bacilli excreted in the manure, secondarily infecting the milk through careless handling. Ordinarily, market milk is infected with tubercle bacilli in about 10 per cent. of the samples. Recently, in New Haven, 50 per cent. of the milk was found to contain sufficient tubercle bacilli to infect the guinea-pig. Fortunately this milk was pasteurized, after which it was impossible to infect guinea-pigs.

In a recent study in New York City about 1 per cent. of adults suffering from tuberculosis were found to be infected with the bovine type, while among the children more than 25 per cent. were due to this type of the organism.

Pasteurization, although it may kill the tubercle bacillus, must not be used as a substitute for the tuberculin testing of cattle. Tuberculin testing cannot take the place of sterilization. As mentioned previously in these columns, the certification of milk and the pasteurization of milk, unless extremely well controlled, are both liable to human error and human cupidity. Under these circumstances the danger of an assumed security is added. Pasteurization generally makes milk safe if properly performed, and all milk sold should be pasteurized. Boiling almost surely renders milk safe, and milk for infants should be boiled. The vitamin factor need not be considered, for since many raw milks are deficient in their vitamins, these should always be supplied in infant feeding.

MILK-BORNE SCARLET FEVER.

THE Buffalo Department of Health recently found in three days 23 cases of scarlet fever scattered along one milk dealer's route. Although no one was found to be ill in the milk dealer's family, a tenant in the upper flat had scarlet fever, and a cat was a common visitor in both families. One victim never drank milk, but cleaned and filled milk bottles for the dealer. Two farms were found to supply milk to the city dealer, and here a smothered outbreak of scarlet fever already covering several weeks was discovered.

The interesting point in regard to this outbreak is that, although the milk was supplied raw to the dealer, it was pasteurized in his own dairy before distribution. Doubt must therefore be thrown on the method and effectiveness of his pasteurization, which bears out the statement we have made elsewhere, that pasteurization, unless properly controlled, may in itself constitute a danger by fostering a false sense of security.

THE FLORENCE CRITTENTON LEAGUE.

THE Florence Crittenton League of Boston, a branch of the national organization that is represented in many cities, is undertaking to raise \$250,000 for the construction of a new Home, to consist of four 16-bed units which will be a model for institutions of this kind. Their appeal is one which should meet with the approval and the generosity of the profession and the laity.

The service which the League renders is unique and invaluable to any large community. Unfortunate girls are sheltered and cared for before their babies are born; they are delivered by members of an excellent voluntary staff, and are cared for until they can be properly placed with their babies, or, when circumstances render it necessary, mother and child are separately placed. Most of the physicians of this community are familiar with the work which is being done by the League. Those who are unfamiliar with it should, if they are able, respond to the general appeal that is being made in its behalf, but at any rate they should avail themselves of the opportunity it affords for the proper care and placing of these unfortunate girls who may come to their attention.

BOSTON HEALTH DEPARTMENT BULLETIN.

THE slogan for the last issue of this publication is "Clean up, wash up." This refers to the condition of dwellings and their surroundings, made especially bad by the long severe winter.

Typhoid fever is especially mentioned as appearing through imported cases, and general immunization is recommended because the disease is appearing earlier than usual.

Boston's death rate from typhoid is 1.0 per 100,000 for 1922 and is the lowest of cities in the United States of more than 500,000 population.

Advice relating to hay fever and the mosquito nuisance is given.

An explanation of Boston's infant death rate is given in the assertion that this mortality is due to a considerable extent to deaths among non-residents.

Especial prominence is given to the value of Dr. Devine's article published in the *BOSTON MEDICAL AND SURGICAL JOURNAL*, Vol. 187, No. 22, November 30, 1922.

Cleanliness in food establishments is being stressed by the Department, and circulars setting forth the requirements in force are being sent to places where food is prepared or served.

Physicians are notified that dog-bites requiring antirabic treatment must be reported, and it is urged that all dog-bites should be reported to local boards of health.

The March survey of market milk gives the per cent. of solids, fat and the bacteria found in the samples of milk sold in Boston.

Other interesting data and advice are presented. It is an instructive publication.

CHARITY OR —?

YOUNG women are soliciting the purchase of the *National Child's Education Magazine* on the streets of Boston. Those who are approached are led to infer that the money secured by the sale of this publication is to be devoted to charity. A similar method was in use within a year or two, and investigation failed to reveal any useful application of the funds secured, unless the promoters were acting on the principle that charity begins at home.

There are many organizations in need of money which will make good use of contributions. Wise persons do not respond to solicitation for money without knowing where it is to be spent, and by whom it is to be used.

This is a safe rule to follow, but a proportion of kind-hearted people will give a small amount without investigation rather than refuse. Response to unknown or unendorsed solicitors is often evidence of weakness rather than philanthropy.

Investigate before giving.

THE CITIZENS' MILITARY TRAINING CAMPS.

THE reports of the good results attained through military training and instruction as set

forth by Colonel Kean in this week's issue of this JOURNAL should be made known to the parents of boys.

This training does more than fit young men for military service, for the improved physical conditions and habits of obedience established under this régime will make better citizens of the graduates of these camps. We venture to predict that these men will give on the average a better account of themselves in after life than an equal number of those who have not had these advantages.

THE HOUSEHOLD NURSING ASSOCIATION.

IN another column we print an article outlining the work of the Household Nursing Association of Boston. This institution has not attracted the attention of either the public or the profession which it rightly deserves. It has not sought publicity, but has quietly perfected its organization and raised its standards while it has been supplying a type of economical and efficient home nursing care for patients of moderate means.

The demand for such nursing has been recently receiving more attention from important medical sources, but it should be a matter of local pride that public-spirited citizens and physicians of Boston have anticipated this demand and to the extent of their ability have been supplying it for the last ten years. The highly trained graduate nurse has become a necessity, but is often a problem as well. The old-fashioned attendant nurse is often a far more difficult problem, but sometimes a necessary substitute. Supervised attendant nurses of good character and trained by a standard curriculum in the simple household duties of caring for the sick will go far toward solving these problems and will soon, we believe, take their place as necessary adjuncts to the efficient and kindly care of patients of moderate means. We urge our readers to become acquainted with this Association's work and give it their support.

Miscellany.

NOTES FROM THE WORCESTER DISTRICT MEDICAL SOCIETY.

THE last meeting of the Society, held April 11, was unusually interesting. Papers were presented by members of the staff of Memorial Hospital. Dr. Donald S. Adams reported some observations on a series of fifty cases of blood transfusion. Whole fresh blood was used by the tube method. Stress was laid on the importance of avoiding the reactions attributable to isoagglutinins by careful comparisons of the

donors' corpuscles and patients' serum and *vice versa* to detect any possible reactions before attempting to transfuse. Conclusions were that acute sepsis was rarely benefited by fresh blood, the same being said of new malignant growths. Chronic sepsis and secondary anemias not associated with acute sepsis or malignancy received decided benefits. Traumatic hemorrhage or urgent cases should be grouped by means of known sera. Care should be exercised to exclude any of the agglutinins that might cause a reaction.

Dr. Joseph O'Connor showed x-ray plates of various deformities of the pelvis in pregnancy.

Dr. Philip Cook reported a remarkable case of lymphosarcoma treated by the x-ray which has been kept under control to a certain extent since 1914.

Dr. John E. Talbot discussed the placental infarct and its relation to the etiology of deformed babies.

Evidence was submitted tending to show that the placental infarct is the result of hematogenous infection of the placental site.

Applying this principle of infection to the etiology of deformed babies; seventeen consecutive cases of deformed babies were reported which showed placental damage at the base of the cord. Several of the cases reported showed acute infections in the head within the first forty days of the pregnancy with contemporaneous placental damage at the base of the cord in association with a deformed baby. Others were attributed to the associated foci of chronic infection found in the cases. Drawings of several of the placentas and four preserved specimens were demonstrated.

Dr. Benjamin T. Burley discussed "Brown-Séquard's Paralysis from Fracture Dislocation of Upper Cervical Vertebrae."

The reader spoke of the comparative rarity of Brown-Séquard's paralysis with cervical fracture, particularly as high up as the atlas and axis. He described the anatomy in these regions and gave as a reason for the possibility of recovery from fractures at this level two factors: first, the increased width of the vertebral ring surrounding the cord at this level; second, the effect of direct trauma upon the head transmitted to the atlas was to spread the bony fragments away from the cord.

He demonstrated the case of a male, 31 years old, who in June, 1922, was thrown backward through the slipping of a wrench on which he was pulling. He struck his head against a steel locker but was only momentarily unconscious. He was admitted to the Memorial Hospital, Worcester, on the surgical service and was treated as a head case.

Examination by the reader on the third day revealed a partial hemiplegia of the left side with disturbances of pain and temperature senses on the right side, particularly below the

waist. X-ray showed fracture with dislocation forward of the atlas and axis.

Extension and later plaster collar and jacket followed by a leather collar and jacket was the treatment carried out. The patient has made a fairly good recovery. Motion of the neck is now good. The right leg is somewhat paresthetic, and the left side is slightly spastic. The patient walks without limping.

Dr. Gordon Berry reported an interesting case of brain abscess with a demonstration of pathological specimens.

Dr. Oliver Stansfield gave a brief report on the use of insulin and said that while insulin offers a tremendous boon to diabetes and is a long stride forward in the treatment of diabetes, yet it does not render the dietetic and general treatment of the disease obsolete. One improvement greatly to be desired is a preparation of a product potent when taken orally. Doubtless this will come, and in the meantime we still can offer life to the diabetic patient who is passing down hill.

A vote of thanks was given to the Trustees of the Hospital for the refreshments served after the meeting.

HAMPDEN DISTRICT MEDICAL SOCIETY.

At the Annual Meeting of the Society, held April 23, the following officers were elected:

President, R. S. Benner, M.D., Springfield; vice-president, G. D. Henderson, M.D., Holyoke; secretary and treasurer, H. L. Smith, M.D., Springfield; commissioner of trials, R. H. Seelye, M.D., Springfield.

Censors: F. L. Everett, M.D., Springfield (supervising); F. T. Clark, M.D., Westfield; J. J. Carroll, M.D., Holyoke; Ernest L. Davis, M.D., Springfield; J. P. Schneider, M.D., Palmer.

Councillors: G. H. Janes, M.D., Westfield, principal; R. B. Ober, M.D., Springfield, alternate; E. P. Bagg, Jr., M.D., Holyoke; L. D. Chapin, M.D., Springfield; M. D. Chisholm, M.D., Westfield; E. C. Dubois, M.D., Springfield; F. F. Dexter, M.D., Springfield; A. C. Eastman, M.D., Springfield; F. L. Everett, M.D., Springfield; G. L. Gabler, M.D., Holyoke; M. B. Hodgkins, M.D., Palmer; F. S. Hopkins, M.D., Springfield; I. N. Kilburn, M.D., Springfield; E. A. Knowlton, M.D., Holyoke; A. G. Rice, M.D., Springfield.

H. L. SMITH, M.D., *Secretary*.

WORCESTER NORTH DISTRICT MEDICAL SOCIETY.

At the Annual Meeting of Worcester North District, held at Fitchburg, April 24, Dr. C. E. Thompson delivered an address entitled "The Present Trend of Psychiatry." Following is the list of officers elected:

President, Francis M. McMurray, M.D., Fitchburg; vice-president, Bertrand H. Hopkins, M.D., Ayer; secretary, Curtis H. Jennings, M.D., Fitchburg; treasurer, Frederick H. Thompson, Jr., M.D., Fitchburg.

Censors: Supervisor, D. S. Woodworth, M.D., Fitchburg; F. R. Donovan, M.D., Fitchburg; George Mossman, M.D., Westminster; R. A. Rice, M.D., Fitchburg; F. H. Thompson, Jr., M.D., Fitchburg.

Councillors: A. F. Lowell, M.D., Gardner; H. R. Nye, M.D., Leominster; E. A. Sawyer, M.D., Gardner; D. S. Woodworth, M.D., Fitchburg; Nominating Councillor, E. A. Sawyer, M.D., Gardner; alternate, A. F. Lowell, M.D., Gardner.

Dr. C. Bertram Gay will be the annual orator.

C. H. JENNINGS, M.D., *Secretary*.

BOSTON RADIUM CLUB.

The newly organized Boston Radium Club held its first meeting on April 30, 1923, at the Huntington Memorial Hospital. A very interesting and instructive program was presented which consisted of the following:

1. "Radium at the Huntington Memorial Hospital," Dr. Robert B. Greenough.

2. "Radium in Treatment of Malignant Disease of the Lip, Tongue and Jaw," Dr. Channing C. Simmons.

3. "Radium in Treatment of Cancer of the Cervix," Dr. George A. Leland, Jr.

A discussion of the papers followed.

The following officers of the Club were elected: President, Dr. William P. Graves; Vice-President, Dr. Robert B. Greenough; Secretary and Treasurer, Dr. Charles Whelan. Drs. William P. Duane, Francis H. Williams and S. B. Wolbach were elected honorary members.

The charter members of the Club consist of the following doctors: W. P. Graves, R. B. Greenough, Charles Whelan, I. J. Walker, J. H. Blaisdell, C. G. Lane, G. W. Holmes, M. C. Sosman, D. C. Greene, J. H. Cunningham, F. A. Pemberton, R. C. Graves, G. A. Leland, Jr., C. C. Simmons, T. W. Thorndike, W. C. Quinby.

REPORT OF HAVERHILL BOARD OF HEALTH.

THE Board reports that the death rate of Haverhill for 1922 was the lowest in the history of the city, being 11.98 per 1000. Fifty of the decedents came to the city for hospital care. This was an unusual number. The per capita cost for health administration was 59 cents. The report presents a complete statistical record of the work of the departments under the supervision of this board.

A HEALTH OFFICER WANTED.

Savannah, Georgia, has advertised for a health officer. The inducements offered are a salary of \$4800 a year, an automobile for official business, and freedom from political interference.

We would like to learn how the last-named guarantee can be made effective; if it can the millennium has arrived in Georgia.

BROADCASTING PUBLIC HEALTH INFORMATION BY RADIO.

The end of the first year's existence of the Pioneer Health Information by Radio Service of the World, by which title the radio service of the United States Public Health Service is popularly known, finds it serving, in addition to NAA, Arlington, the Naval Radio Station, at Radio, Virginia, 23 coöperating broadcasting stations so situated as to serve practically every portion of the United States. Stations in Arizona, California, Colorado, Kansas, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, North Dakota, South Dakota, New Mexico, New York, Ohio, Oregon, Pennsylvania, Texas, Utah, Washington, Wyoming, and Ontario, Canada, are now coöperating with the Public Health Service in releasing its broadcasts by radio. Plans to extend the service to Alaska and Hawaii are under way.

The coöperating stations are operated by newspapers, universities, electrical supply companies and other commercial organizations. These broadcasts after being released by radio are, furthermore, regularly translated into 17 different tongues by the Foreign Language Information Service and supplied the foreign language press both in the United States and in Europe. Correspondence in regard to these broadcasts from as far away as Czechoslovakia has reached the Public Health Service.

In the first six months of its existence, directly and indirectly, it is estimated that this service reached 27,000,000 people in the United States alone. For the second six months no definite figures are as yet available, but it is estimated that at the present time there are more than 2,000,000 radio receiving sets within range of stations releasing these health bulletins.

One interesting and by no means unimportant feature of this unique service is that it has involved practically no additional expenditure on the part of the Public Health Service.—United States Public Health Service.

News Items.

MASSACHUSETTS GENERAL HOSPITAL.—The Fortnightly Clinical Conference of the Medical Staff was held in the Cardiac Clinic Room, Out-

Patient Department, at noon, Tuesday, May 1. Cases were presented for discussion.

HARVARD MEDICAL SOCIETY.—This Society met in the Peter Bent Brigham Hospital Amphitheatre Tuesday evening, May 8, at 8.15 o'clock. The program included a demonstration of cases, and Dr. R. M. Wilder of Rochester, Minn., read a paper on "Insulin and the Surgical Complications of Diabetes."

PROFESSOR GEORGE C. WHIPPLE.—The daily papers have published the statement that Professor Whipple will retire from the Public Health Council of the State Department of Public Health after a service of nine years. He is reported to have notified the Governor that he will not accept reappointment because of the necessity of devoting more time to other matters.

ELECTION OF DR. RICHARD P. STRONG.—At a meeting of the Executive Committee of the Council of the American Association for the Advancement of Science, held in March, 1923, Dr. Richard P. Strong, Director of the Department of Tropical Medicine at the Harvard Medical School, was elected Vice-President of Section N (Medical Sciences) of the American Association for the Advancement of Science.

REVOCATION OF A PHYSICIAN'S REGISTRATION.—The Board of Registration in Medicine has revoked the registration of Dr. Walter B. Willey. Last summer Dr. Willey was arrested, prosecuted, convicted, and fined \$100. He paid the fine. The charge was operating an automobile while under the influence of alcoholic liquor. Subsequent to this conviction a hearing was held, and although the charge was substantiated by the court record, the board placed the case on file with the understanding that if his behavior should subsequently be shown to be unsatisfactory drastic action would be taken. Dr. Willey was recently found to be profoundly under the influence of intoxicating liquor. This fact led the board to revoke his license.

WEEK'S DEATH RATE IN BOSTON.—During the week ending April 20 the number of deaths reported was 264, against 240 last year, with a rate of 17.87. There were 30 deaths under one year of age, against 28 last year. The number of cases of principal reportable diseases were: Diphtheria, 72; scarlet fever, 80; measles, 334; whooping cough, 73; typhoid fever, 1; tuberculosis, 40. Included in the above were the following cases of non-residents: Diphtheria, 4; scarlet fever, 10; measles, 2; typhoid fever, 1; tuberculosis, 3. Total deaths from these diseases were: Diphtheria, 1; scarlet fever, 3; measles, 1; whooping cough, 5; tuberculosis, 22. Included in the above were the following cases of non-residents: Diphtheria, 1; tuberculosis, 2.

Obituary.

ALBERT RAYMOND RICE, M.D.

In the death of DR. ALBERT R. RICE, on April 30, Springfield lost an important citizen. He had been in practice in that city some fifty years; he had been a member of the City Council, was city physician for eleven years, and was a coroner at the time that office was abolished in 1878. Born in Penn Yan, N. Y., April 26, 1841, he was the son of John Rice of Brooklyn, N. Y., president of the Atlantic Bank of New York City. He attended the schools of Brooklyn and the Brooklyn Polytechnic Institute, from which he was graduated in 1858. His medical degree was received from the Jefferson Medical College, Philadelphia, in 1861, thereupon opening an office at once with Dr. William G. Breck in Springfield. The lure of service to his country proving strong, he enlisted in the first Massachusetts Volunteer Cavalry in May, 1862, with the rank of assistant surgeon; in November of that year was transferred to the 49th Massachusetts Infantry, and after the campaign with General Banks at New Orleans was seriously ill with typhoid fever. On recovery Dr. Rice entered the Navy with the rank of lieutenant, junior grade, spending much time on the Talapoosa in the squadron blockading Wilmington. At the close of the war he began practice again in Springfield, and had been actively engaged in taking care of a general practice until he was retired on the books of the State Medical Society in 1906, since then doing much work for the insurance companies with which he was connected. Dr. Rice was married August 22, 1870, to Nancy W. Hill of Somersworth, N. H. They had four sons. She died in January, 1922. Among his memberships were Roswell Lee Lodge of Masons; Springfield Commandery and Melha Temple, Mystic Shrine; E. K. Wilcox Post, G. A. R.; Loyal Legion; Massachusetts Medical Society and the Hampden County Medical Association. For many years he was a member of the consulting staff of the Mercy Hospital.

Correspondence.

ACCOMMODATIONS FOR MEMBERS OF THE MASSACHUSETTS MEDICAL SOCIETY.

Mr. Editor:

I am sending hotel rates in Pittsfield, Lenox, Dalton, Stockbridge and Lee for members who wish reservations for the Annual Meeting, June 12 and 13. Lenox and Dalton are each about four miles from Pittsfield, with excellent roads.

The Berkshire Committee would be pleased to have these printed in the JOURNAL, with your permission. Members can engage rooms direct with hotels, at

present, and as Chairman of the Committee for Accommodations, I would care for members having any difficulties.

P. J. SULLIVAN, M.D.

Dalton, Mass.

PITTSFIELD.

Maplewood (Headquarters) American Plan		Single	Double
Without Bath		\$7.00	
With Bath			9.00
American House, European Plan			
Bowl and Pitcher	\$1.50	2.50	
Running Water	2.00	3.00	
With Bath	4.00	6.00	
Wendell Hotel, European Plan			
Running Water		\$2.50 each	
With Bath		3.00 each	
Twin Beds		4.00 each	

LENEX.

Curtis Hotel, American Plan.... \$6.00 a day and up

DALTON.

Irving House, European Plan			
Double	\$1.50 apiece		
Single	2.50 apiece		
Breakfast, 75c; Dinner and Supper, \$1.00			
Highlawn Farm, American Plan, \$20 to \$30 a week			

STOCKBRIDGE.

Red Lion Inn, American Plan		Single	Double
Without Bath	\$7.00-89.00	\$14.00	
With Bath	9.00-10.00	16.00	

LEE.

Greenock Inn

THE USE OF INSULIN.

April 22, 1923.

Mr. Editor:

I was interested in the paper of Dr. Arthur T. Jones, published in the JOURNAL of April 5, knowing the author and those who discussed it, and also because of its subject.

The facts brought out were true in every particular, up to the time, a few months ago, when Macleod and Banting discovered methods for the preparation and use of insulin. This has entirely changed the situation.

We are somewhat of a diabetic centre here, because of the Potter Metabolic Clinic, connected with the Cottage Hospital. Here Dr. W. D. Sansom has treated more than a hundred patients with insulin, and among these there have been some surgical conditions.

Mild gangrene cases have healed when sugar free. A dozen tonsillectomies have been done, where infection was a detriment to the patient. Two major operations have been done without trouble.

Thus in my work I do not hesitate to remove tonsils with ether or local anesthesia, and I would not be worried over a mastoidectomy in a diabetic, if indicated; because, the diabetic, under what is today the proper care, from the surgeon's standpoint, ceases to be a diabetic. He can have a 1000 calorie diet or more, to maintain proper weight and strength. If his sugar tolerance is too low for this, insulin will take care of the difference. His acidosis can be

quickly eliminated. If the operation is an emergency and he is not sugar free, he begins to be within twenty minutes after the first injection of insulin.

So delay and low diet are disposed of, and coma and acidosis are forestalled, which makes surgery safe as far as his diabetes is concerned.

One of our more recent cases was a woman with a very large colloid goitre, disfiguring and disabling, pushing the head over from its mere size. On entrance she had a sugar tolerance of zero, but she was kept sugar free on an ample diet. The tumor was removed under gas-ether very successfully, and she has made a good, uneventful recovery.

Sugar tolerance usually drops back to zero after operation, but by the time the patient is eating, again is satisfactory.

Medical progress has again cleared away the hazards in another distressing condition.

PHILIP C. MEANS, M.D.

402 San Marcos Building,
Santa Barbara, California.

THE CADUCEUS.

April 28, 1923.

Mr. Editor:

I am informed, though unauthoritatively, that the Caduceus, the official emblem of the American Medical Association, to be attached to automobiles, is not recognized by the police officials of the Commonwealth of Massachusetts. It should be, and as is the case in the States where it is in force, it will give the doctor's car right of way.

JAMES BROWN THORNTON.

168 Huntington Avenue, Boston.

AMERICAN MEDICAL ASSOCIATION. COUNCIL ON PHARMACY AND CHEMISTRY.

Mr. Editor:

During April the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-official Remedies: Abbott Laboratories: Neutral Acriflavine-Abbott, Tablets Neutral Acriflavine-Abbott, 0.03 Gm. ($\frac{1}{2}$ Gr.); Enteric Coated Tablets Neutral Acriflavine-Abbott, 0.03 Gm. ($\frac{1}{2}$ Gr.)

Hynson, Westcott & Dunning: Phenoltetrachlorophthalein-H. W. & D., Ampules Phenoltetrachlorophthalein-H. W. & D.

Mallinckrodt Chemical Works: Carbon Tetrachloride Medichal-M. C. W.

Merck & Co.: Skiabaryt (for rectal use)-Merck, Skiabaryt (for oral use)-Merck.

Powers-Weighman-Rosengarten Co.: Carbon Tetrachlorid C. P.-P. W. R.

Non-proprietary Articles: Neutral Acriflavine, Carbon Tetrachloride Medichal.

W. A. PECKNER, Secretary.

Council on Pharmacy and Chemistry.

NOTICES.

MASSACHUSETTS SOCIETY OF EXAMINING PHYSICIANS.

The annual meeting and election of officers of the Massachusetts Society of Examining Physicians will be held at the Copley-Plaza on Wednesday, May 16, at 6.30, followed by dinner at 7 P. M.

Subject: "Syphilis and Trauma".

1. The Surgical Aspects, Dr. C. L. Scudder.

2. The Neurological Aspects, Dr. Henry Viets.
3. The Medical Aspects, Dr. Malcolm Seymour.
4. The X-Ray Aspects, Dr. George W. Holmes.

General Discussion.

WM. PEARCE COUES, M.D., President,
H. F. DAY, M.D., Secretary.

MEETING OF THE BOSTON ASSOCIATION FOR THE PREVENTION AND RELIEF OF HEART DISEASE

AT THE HARVARD MEDICAL SCHOOL, MAY 17, 1923, AT 8.15 P. M.

Dr. K. F. Wenckebach, professor of the first medical clinic of Vienna, will speak on Heart Disease. Professor Wenckebach is one of the leading authorities on heart disease in Europe.

The general medical public is cordially invited.

Professor Wenckebach will also give three amphitheater clinics at 12 o'clock noon at the Peter Bent Brigham Hospital, the Massachusetts General Hospital, and the Boston City Hospital on May 16, 17 and 18, respectively. All those interested are cordially invited.

NOTICE OF EXAMINATION FOR ENTRANCE INTO THE REGULAR CORPS OF THE UNITED STATES PUBLIC HEALTH SERVICE.

Examinations of candidates for entrance into the Regular Corps of the U. S. Public Health Service will be held at the following-named places on the dates specified:

At Washington, D. C. July 9, 1923
At Chicago, Illinois July 9, 1923
At San Francisco, Cal. July 9, 1923

Candidates must be not less than twenty-three nor more than thirty-two years of age, and they must have been graduated in medicine at some reputable medical college, and have had one year's hospital experience or two years' professional practice. They must pass satisfactorily, oral, written, and clinical tests before a board of medical officers and undergo a physical examination.

Successful candidates will be recommended for appointment by the President with the advice and consent of the Senate.

Requests for information or permission to take this examination should be addressed to the Surgeon-General, U. S. Public Health Service, Washington, D. C.

H. S. CUMMING, Surgeon-General.

SOCIETY MEETINGS.

The annual meeting of the Massachusetts Medical Society will be held in Pittsfield, June 12 and 13.

STATE, INTERSTATE AND NATIONAL SOCIETIES.

NEW ENGLAND PEDIATRIC SOCIETY:—Meeting May 11, at Boston Medical Library.

May, 1923:—Massachusetts Society of Examining Physicians (date and place undecided), American Pediatric Society meeting, May 31, June 1 and 2, 1923, at French Lick Springs Hotel, French Lick, Ind.; H. C. Carpenter, Secretary.

May, 1923:—Boston Association of Cardiac Clinics. Meeting May 17, 1923, at 8.15 P. M., Children's Hospital. Subject: Rheumatism and Chorea and Heart Disease.

June, 1923:—The Nineteenth Annual Meeting of the National Tuberculosis Association will be held in 1923 in Santa Barbara, Calif., from June 20 to 25, inclusive, in the Recreation Center.

June, 1923:—American Medical Association, San Francisco, June 25-29, 1923; Olin West, Chicago, Ill., Secretary.

July, 1923:—Massachusetts Association of Boards of Health, July 20, Nantasket; W. H. Allen, Mansfield, Mass., Secretary.

October, 1923:—Boston Health Show will be held in Boston, October 6-13, inclusive.

October, 1923:—Meeting of the American Health Association will be held in Boston, October 8-13, inclusive.

For list of Officers of the Massachusetts Medical Society, see page xii of the Advertising Section.